Journal of Education.

NEW ENGLAND and NATIONAL.

VOL. XLI. {Number 10. Whole No. 1018. BOSTON & CHICAGO, THURSDAY, MARCH 7, 1895. Weekly. {$2,50 per year. Single Copies, 6 cents.

BOOKS IN TOUCH WITH THE BEST EDUCATIONAL THOUGHT OF THE DAY

Patriotic Stories from American History
Dodge's Stories from American History
Noble Deeds of Our Fathers
Boston Tea Party and Other Tales
Blaisdell's Stories of the Civil War
A grand collection for schools
Strongly bound in boards, each 35 cts

Geography by the Journey Method
King's Picturesque Geographical Readers
(1) HOME and SCHOOL
(2) THIS CONTINENT of OURS
(3) VISITS to MAINE-WASHINGTON, etc
(4) VISITS to FLORIDA-CHICAGO, etc
(5) VISIT TO ROCKY MTS. and PACIFIC
(1) 58, (2) 83, (3) (4) and (5) 64 each

Authorized for Boston Schools
Young Folks' Robinson Crusoe
BY MRS. FARRAR
Edited by Oliver Optic. 35c
Arabian Nights for Schools
Edited by S. Eliot, LL.D 35c
Tweed's Grammar for Common Schools
By Prof. S. F. Tweed 35c

Natural History for Young Folks
(1) Quadrupeds
(2) Bees Butterflies, etc
(3) Fishes and Reptiles
(4) Sea Urchins & Star Fishes
(5) Sea Shells & River Shells
(6) Birds of Many Lands
By Mrs. Sanborn Tenney
Each, 35 cents

Froebel's Masterpiece
Mother Play and Nursery Songs
Edited by Miss Peabody. $1.75
12 Kindergarten Cards
Selected from the pictures in Mother Play for the pupil's personal use Sample number prepaid, 10c. Per doz. cards, 60c

THE TEACHER'S TOOL-CHEST
Methods in Schools of Germany
By Dr. J. T. Prince. $1 15
Chips from a Teacher's Workshop
By Dr L. R. Klemm. $1 35
Elementary Woodwork
By George B. Kilbon. 83c
A Manual of Analysis and Parsing
By Martha R. Orne. 35c

Lee & Shepard's Historical Helps
A Pathfinder in American History
By Profs. Gordy and Twitchell. $1.35
Topics for the Study of American History
By Albert L. Bacheler. 55c
Topics for the Study of English History
By Mary E. Wilder. 35c
Topics for Study of Roman History
By Caroline E. Trask. 35c

Reading for Primary Grades
TWEED'S GRADED READERS
1st year, 2d year, 3d year
Bound in Boards, each, 22c
12 numbers, paper, each, 5c
Miss West's Class in Geography. By Frances E. Sparhawk. - - - 35c

Easy Steps in Science
A PRIMARY SCRIPT READER
By Frances E. Oliver, - 35c
This little book is intended to meet the demand for more thought in the reading lessons of the youngest children. It is remarkably successful.

Modern Physical Culture
The Special Kinesiology of Educational Gymnastics
By Baron Nils Posse, $3.00
A Handbook of School Gymnastics
By Baron Nils Posse. 55c

At the above quoted prices carriage is prepaid

LEE & SHEPARD 10 Milk St. Boston will send free {Catalogues, specimen pages, full descriptive circulars, special terms for introduction

Repetition and Parallelism,
IN ENGLISH VERSE.

A Study in the Technique of Poetry.

By C. ALPHONSO SMITH, Ph.D.,
Former Assistant in English in the Johns Hopkins University.

Note What Is Said of It:

WILLIAM J. ROLFE (Editor of "Shakespeare"): "Intensely interesting and suggestive . . . cannot fail to be appreciated by critics, teachers, students, and all lovers of the music of verse."

ALBERT S. COOK (Yale University): "A useful book."

HAMILTON W. MABIE (Editor of "Outlook," N. Y.): "A very suggestive literary study, . . . The treatment of Poe is both fresh and sane."

JAS. W. BRIGHT (Johns Hopkins Univ.): "An important contribution to the Rhetoric of Poetry."

WM. P. TRENT (Univ. of the South): "A distinctively valuable contribution to a branch of our English work that has been strangely neglected by scholars."

EDWIN A. ALDERMAN (Univ. of N. C.): "Deserves a place on the desk of every student in America."

J. DOUGLAS BRUCE (Bryn Mawr College): "An excellent piece of work,—a contribution of decided value to the study of the rhetorical means by which poetry gains its effects."

CHARLES HUNTER ROSS (Ala. Polytechnic Institute): "I have never before read so sympathetic and just a criticism of Poe's rank as a poet."

HIRAM CORSON (Cornell Univ.): "I consider it a truly valuable contribution to the subject of English verse."

ROBERT SHARP (Tulane University): "Have already highly recommended it to my students, and shall continue to do so."

Send for Descriptive Catalogue of our Educational Publications.

UNIVERSITY PUBLISHING COMPANY,
43–47 E. Tenth St., New York.
NEW ENGLAND DEPT.,
352 Washington St., Boston.

A QUESTION BOOK WORTH HAVING.

THE NEW YORK STATE EXAMINATION QUESTIONS

For Twenty Years, 1874-1894,

Containing all the Questions given at the examinations for State Certificates from the beginning to the present time, as follows:—Algebra, 211; civil government, 192; geometry, 204; physics, 160; American history, 256; composition, 173; German, 60; physiology, 158; arithmetic, 249 drawing, 169; grammar, 306; rhetoric, 167; astronomy, 130; French, 60; Latin, 229; school economy, 237; bookkeeping, 159; general history, 163; literature, 191; school law, 199; botany, 153; geography, 335; methods, 232; spelling 50; chemistry, 140; geology, 139; penmanship, 61; zoölogy, 140. In all,

4,923 Questions in 28 Subjects,

Forming by far the most complete and carefully prepared Question Book ever issued. 12mo, pp 437. Sent postpaid, in Cloth, for $1.00; in Manila, for 50 cents.

C. W. BARDEEN, Publisher, - - - Syracuse, N. Y.

FOR FACILITATING VERB STUDY.

The French Verb. By Prof. Schele de Vere, Ph.D., LL.D., of University of Virginia. 12mo, cloth, $1 00
French Drill Book, B. 12mo, cloth, 82 pages, - - - - - - - - - - - - .50
French Verbs at a Glance. By Mariot de Beauvoisin. 8vo, 61 pages, - - - - - - - - .35
French Verbs. REGULAR AND IRREGULAR. By Chas. P. Du Croquet. 12mo, cloth, 47 pages, - .30
Mme. Beck's French Verb Form. A book with forms arranged for rapid work. Price, - .50
Blanks for the Conjugation of French Verbs. By Chas. P. Du Croquet. Put up in tablets of about seventy-five sheets. Per tablet, - - - - - - - - - - - - - - - .30
Blanks for the Conjugation of Latin Verbs. By Frank Drisler, A.M. Put up in tablets of about seventy-five sheets. Per tablet, - - - - - - - - - - - - - - - .20

For sale by all booksellers, or sent postpaid on receipt of price.
Complete catalogue of all publications when desired.

William R. Jenkins,
851 and 853 Sixth Avenue (N. W. corner 48th St), New York.

MARCH

THE piercing winds of March but tell the hour
Of Spring's approach, the end of Winter's power;
While swiftly Esterbrook's elastic pen
Responsive bounds in hands of writing men.

ESTERBROOK

SPEAKING of elastic pens,—the nicest, prettiest pen in that line is Esterbrook's "A 1 Professional." It is fine pointed, very flexible, and is just the pen suited for school purposes. Ask your stationer for them, or, failing to procure, write to

THE ESTERBROOK STEEL PEN COMPANY, 26 John St., New York.

Composition Correcting Made Easy.

TEACHERS have complained of the size and softness of the ordinary red and blue pencils when used for correcting compositions, and we have therefore, by special request, made a blue pencil and a red pencil with small leads of hard grade. We believe they will prove a blessing to every teacher who has compositions and examples to correct, or roll book to check. While it is impossible to make a colored lead of great strength, we believe these leads will be found strong and tough. Samples will be sent on receipt of three two-cent stamps.

Mention the "Journal of Education."

JOS. DIXON CRUCIBLE CO., . . JERSEY CITY, N. J.

Physical and Chemical Apparatus,

Microscopes, Telescopes, and Lanterns,
Dynamos, Motors, and Electrical Test Instruments.
ANATOMICAL MODELS.
Chemicals and Chemical Glass Ware.
Special Apparatus to Order.
☞ *Send for Catalogues and Prices.*

ALFRED L. ROBBINS CO.
(Successors Science Dept. of National School Furnishing Co.)
Factory and Warerooms : 179-181 Lake St., Chicago.
Mention this paper. Established 1871.

WALMSLEY, FULLER & CO.
Only complete Science Factory in the West.
Physical and Chemical Apparatus.
Special Instruments of Precision.
MICROSCOPES, TELESCOPES,
Photographic Supplies,
OPTICAL LANTERNS.
CHICAGO.

$50,000 CAPITAL.

WANTED, AT ONCE, the addresses of a few thousand EASTERN (East of Ohio) School Officials, Teachers, Church Officials, and Clergymen, who would like full information regarding a new corporation now being organized under the laws of the State of New York for handling a general line of School and Church Goods, AT THE RIGHT PRICES, throughout the Eastern States.

The plan of organization contemplates various new features especially attractive to its stockholders, and commends itself STRONGLY to the consideration of SUPERINTENDENTS and TEACHERS, both ladies and gentlemen, *alike.* Already indorsed by numerous educators, and stock subscribed for. Ample references.

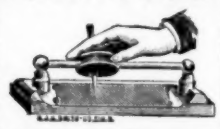
Charter Shares, Full Paid, Only $10 Each.

ONE SHARE will entitle holder to full benefits, including declared dividends.

Your address on a postal, plainly written, *with name of this paper*, will bring full particulars. Send at once if interested, please, as this notice will not appear here again. Stock at "ground floor" rates for a limited time only.

Address,
THE W. A. CHOATE CO.,
School and Church Furnishers,
24 State St.,
ALBANY, N. Y.

Perfect Pencil Pointer.



INVALUABLE to all who use pencils. Will not break the lead or get out of order. Price $1. Express PREPAID. $1.25. ☞ MONEY REFUNDED IF NOT SATISFACTORY.

"I use the Pencil Sharpener at teachers' examinations and it now seems indispensable."
WM. J. WICKERSHEIM,
Supt. of Schools, Lincoln Co., Minn.
☞ *Send for Circulars.*
GOODELL CO., Antrim, N. H.

D. L. DOWD'S HEALTH EXERCISER.

For Gentlemen, Ladies, Youths; athlete or invalid. Complete gymnasium; takes 6 in. of floor room; new, scientific, durable, cheap. Indorsed by 100,000 physicians, lawyers, clergymen, editors, and others now using it. Illustrated circular, 40 engravings, free. Address D. L. DOWD, Scientific, Physical, and Vocal Culture, 9 East 14th Street, New York. 13teow

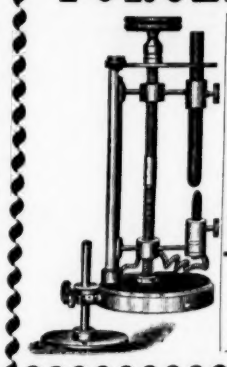
SKINNY Using "Adipoidia" gain 10 lbs. per month. Only genuine Fattening Preparation ever discovered.
A harmless and delicious Beverage which acts like magic. Particulars 4 cents.
WOMEN
WILCOX SPECIFIC CO., Phila., Pa.

Musical, far sounding, and highly satisfactory Bells for Schools, Churches, &c.
MENEELY & CO., WEST TROY, N. Y. | Established 1826.
Description and prices on application.

Work FOR ALL. $75 a month salary and expenses paid. If you want employment write at once to P. O. VICKERY, Augusta, Me

Subscribers to the *Journal* can have their subscriptions advanced *six months* by sending a *new* yearly subscription.
NEW ENG. PUB. CO., 3 Somerset St., Boston.

FORCED "REORGANIZATION" SALE!!



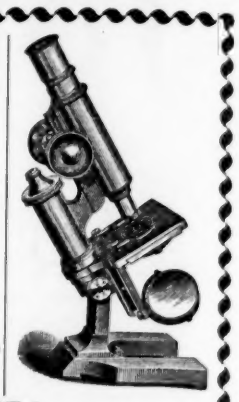
We are under the necessity of announcing that because of the general depression which has affected business in the United States for more than a year past, our Company has considered it advisable to make an "ASSIGNMENT" for the best interests of all parties concerned, and in order that an entire reorganization may be promptly and satisfactorily accomplished.

The immediate result of this action is the placing on the market at **greatly reduced prices** of the larger part of our stock of **Standard Scientific Apparatus,** aggregating in value hundreds of thousands of dollars.

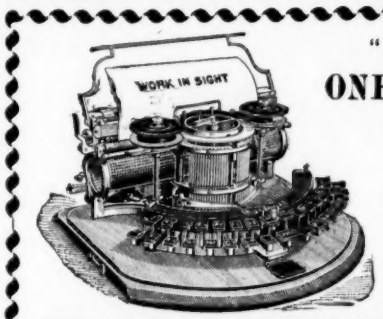
This "Reorganization Sale" will continue only until our stock is reduced to the desired amount. We reserve the right to withdraw any quotation one week after date

Possible purchasers should communicate with us *immediately* and secure circular No. 620, just issued. Catalogues of any particular Dept (8 in number) *free* to Science teachers upon request.

INVESTIGATE THE QUEEN "ELECTRIC CANDLE" FOR PROJECTION LANTERNS.



QUEEN & CO., Inc., 1010 Chestnut Street, PHILADELPHIA.
Numerous World's Fair Awards. N. Y. Office, 116 Fulton St.



"An honest tale speeds best, being plainly told."

ONE HUNDRED "HAMMONDS" IN THE SCHOOLS OF CHICAGO.

The Chicago Board of Education, having included typewriting in their regular course of instruction for public schools, has decided to use the "Hammond" *exclusively* for this purpose. This decision was due to its superior speed, alignment, impression, ease of operation, simplicity, and durability.

THE HAMMOND TYPEWRITER CO., 403-405 E. 62d St., N. Y.
300 Washington St., Boston.

OUR CATALOGUE . . .

Is a handy thing to have. When you need anything in school supplies, you can turn to it and see at once just what the best costs. We will not handle an article that we cannot send out on the "satisfaction or-money-back" plan. No order is too small to secure immediate and courteous attention. No order is too large for our facilities. The catalogue is free.

ANDREWS SCHOOL FURNISHING CO. *for all School Supplies.* 65 Fifth Ave., N. Y.

PARENTS!

? Have you the health and strength of your children at heart?

IF SO, insist upon their being seated comfortably in school.

This is a vital matter and is receiving the attention of the most intelligent people.

See that the new

Chandler ADJUSTABLE Desk and Chair

is used to furnish your **SCHOOL.**

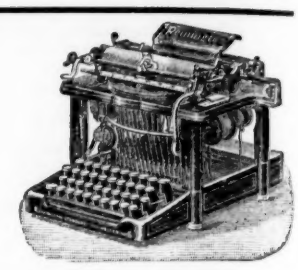
Send for descriptive catalogue.

Now in use in hundreds of the best schools in the country.

CHANDLER ADJUSTABLE SCHOOL FURNITURE COMPANY,
7 Temple Place, Boston, Mass.

KINDERGARTEN AND SCHOOL SUPPLIES. J. W. SCHERMERHORN & CO 3 East 14th St., NEW YORK.

THE No. 6



REMINGTON
STANDARD TYPEWRITER

..A DEVELOPMENT—
NOT AN EXPERIMENT

Many Desirable Improvements skillfully incorporated into the essential features of Simple and Durable Construction for which the Remington is famous....

SEND FOR A CATALOGUE

WYCKOFF, SEAMANS & BENEDICT
327 BROADWAY, NEW YORK

For the Meeting of the
National Educational Association
AT
Denver IN July,
THE NORTH-WESTERN LINE
C. & N. W. RY.
will sell Excursion tickets at a rate not to exceed
One Fare for the Round Trip
with $2.00 added for membership fee.
Through Palace Sleeping Cars, Dining Cars, and Free Reclining Chair Cars, Chicago to Denver.
Write to W. B. KNISKERN, Gen'l Passenger and Ticket Agent, Chicago and Northwestern R'y, Chicago, for full information.

General or local Agents. $75 Ladies or gents, a week. Exclusive territory. The Rapid Dish Washer. Washes all the dishes for a family in one minute. Washes, rinses and dries them without wetting the hands. You push the button, the machine does the rest. Bright, polished dishes, and cheerful wives. No scalded fingers, no soiled hands or clothing. No broken dishes, no muss. Cheap, durable, warranted. Circulars free
W. P. HARRISON & CO., Clerk No. 12, Columbus, O.

USE Barnes' Ink.
A. S. BARNES & CO., 56 E. 10th St., N.Y.

SLOYD

Benches, Tools and Supplies.
Lowest Prices. Headquarters. Send for catalogue.
Chandler & Barber, 15-17 Eliot St. BOSTON.

Every Teacher Needs One.
We can now furnish, at the lowest cash price, *all sizes of* LAWTON & CO.'S
SIMPLEX DUPLICATOR.
They may be seen and tested at Room No. 5, or will be sent by express on application to
HIRAM ORCUTT, Manager,
N. E. Bureau of Education,
3 Somerset St., Boston.
w tf

Journal of Education.

Vol. XLI. BOSTON AND CHICAGO, MARCH 7, 1895. Number 10.

REPORT OF THE FIFTEEN.

Correlation of Studies in Elementary Schools.

By W. T. HARRIS, LL.D.

Read at Cleveland Meeting, Department of Superintendence, February 20, 1895.

I. CORRELATION OF STUDIES.

Your Committee understands by correlation of studies: —

1. Logical order of topics and branches.

First, the arrangement of topics in proper sequence in the course of study, in such a manner that each branch develops in an order suited to the natural and easy progress of the child, and so that each step is taken at the proper time to help his advance to the next step in the same branch, or to the next steps in other related branches of the course of study.

2. Symmetrical whole of studies in the world of human learning.

Second, the adjustment of the branches of study in such a manner that the whole course at any given time represents all the great divisions of human learning, as far as is possible at the stage of maturity at which the pupil has arrived, and that each allied group of studies is represented by some one of its branches best adapted for the epoch in question; it being implied that there is an equivalence of studies to a greater or less degree within each group, and that each branch of human learning should be represented by some equivalent study; so that, while no great division is left unrepresented, no group shall have superfluous representatives, and thereby debar other groups from a proper representation.

3. Psychological symmetry — the whole mind.

Third, the selection and arrangement of the branches and topics within each branch, considered psychologically, with a view to afford the best exercise of the faculties of the mind, and to secure the unfolding of those faculties in their natural order, so that no one faculty is so overcultivated or so neglected as to produce abnormal or one-sided mental development.

4. Correlation of pupil's course of study with the world in which he lives — his spiritual and natural environment.

Fourth and chiefly, your Committee understands by correlation of studies the selection and arrangement in orderly sequence of such objects of study as shall give the child an insight into the world that he lives in, and a command over its resources such as is obtained by a helpful co-operation with one's fellows. In a word, the chief consideration to which all others are to be subordinated, in the opinion of your Committee, is this requirement of the civilization into which the child is born, as determining not only what he shall study in school, but what habits and customs he shall be taught in the family before the school age arrives; as well as that he shall acquire a skilled acquaintance with some one of a definite series of trades, professions, or vocations in the years that follow school; and, furthermore, that this question of the relation of the pupil to his civilization determines what political duties he shall assume and what religious faith and spiritual aspirations shall be adopted for the conduct of his life.

To make more clear their reasons for the preference here expressed for the objective and practical basis of selection of topics for the course of study, rather than the subjective basis so long favored by educational writers, your Committee would describe the psychological basis, already mentioned, as being merely formal in its character, relating only to the exercise of the so-called mental faculties.

It would furnish a training of spiritual powers analogous to the gymnastic training of the muscles of the body. Gymnastics may develop strength and agility without leading to any skill in trades or useful employment. So an abstract psychological training may develop the will, the intellect, the imagination, or the memory, but without leading to an exercise of acquired power in the interests of civilization. The game of chess would furnish a good course of study for the discipline of the powers of attention and calculation of abstract combinations, but it would give its possessor little or no knowledge of man or nature. The psychological ideal which has prevailed to a large extent in education has, in the old phrenology, and in the recent studies in physiological psychology, sometimes given place to a biological ideal. Instead of the view of mind as made up of faculties like will, intellect, imagination, and emotion, conceived to be all necessary to the soul, if developed in harmony with one another, the concept of nerves or brain-tracts is used as the ultimate regulative principle to determine the selection and arrangement of studies. Each part of the brain is supposed to have its claim on the attention of the educator, and that study is thought to be the most valuable which employs normally the larger number of brain-tracts. This view reaches an extreme in the direction of formal, as opposed to objective or practical grounds for selecting a course of study. While the old psychology with its mental faculties concentrated its attention on the mental processes and neglected the world of existing objects and relations upon which those processes were directed, physiological psychology tends to confine its attention to the physical part of the process, the organic changes in the brain cells and their functions.

Your Committee is of the opinion that psychology of both kinds, physiological and introspective, can hold only a subordinate place in the settlement of questions relating to the correlation of studies. The branches to be studied, and the extent to which they are studied, will be determined mainly by the demands of one's civilization. These will prescribe what is most useful to make the individual acquainted with physical nature and with human nature so as to fit him as an individual to perform his duties in the several institutions — family, civil society, the state, and the Church. But next after this, psychology will furnish important considerations that will largely determine the methods of instruction, the order of taking up the several topics so as to adapt the school work to the growth of the pupil's capacity, and the amount of work so as not to overtax his powers by too much, or arrest the development of strength by too little. A vast number of subordinate details belonging to the pathology of education, such as the hygienic features of school architecture and furniture, programmes, the length of study hours and of class exercises, recreation, and bodily reactions against mental effort, will be finally settled by scientific experiment in the department of physiological psychology.

Inasmuch as your Committee is limited to the consideration of the correlation of studies in the elementary school, it has considered the question of the course of study in general only in so far as this has been found necessary in discussing the grounds for the selection of studies for the period of school education occupying the eight years from six to fourteen years, or the school period between the kindergarten on the one hand and the secondary school on the other. It has not been possible to avoid some inquiry into the true distinction between secondary and elementary studies, since one of the most important questions forced upon the attention of your Committee is that of the abridgment of the elementary course of study from eight or more years to seven or even six years, and the corresponding increase of the time devoted to studies usually assigned to the high school and supposed to belong to the secondary course of study for some intrinsic reason.

II. THE COURSE OF STUDY — EDUCATIONAL VALUES.

Your Committee would report that it has discussed in detail the several branches of study that have found a place in the curriculum of the elementary school, with a view to discover their educational value for developing and training the faculties of the mind, and more especially for correlating the pupil with his spiritual and natural environment in the world in which he lives.

A. Language studies.

There is first to be noted the prominent place of language study that takes the form of reading, penmanship, and grammar in the first eight years' work of the school. It is claimed for the partiality shown to these studies that it is justified by the fact that language is the instrument that makes possible human social organization. It enables each person to communicate his individual experience to his fellows and thus permits each to profit by the experience of all. The written and printed forms of speech preserve human knowledge and make progress in civilization possible. The conclusion is reached that learning to read and write should be the leading study of the pupil in his first four years of school. Reading and writing are not so much ends in themselves as means for the acquirement of all other human learning. This consideration alone would be sufficient to justify their actual place in the work of the elementary school. But these branches require of the learner a difficult process of analysis. The pupil must identify the separate words in the sentence he uses, and in the next place must recognize the separate sounds in each word. It requires a considerable effort for the child or the savage to analyze his sentence into its constituent words, and a still greater effort to discriminate its elementary sounds. Reading, writing, and spelling in their most elementary form, therefore, constitute a severe training in mental analysis for the child of six to ten years of age. We are told that it is far more disciplinary to the mind than any species of observation of differences among material things, because of the fact that the word has a twofold character — addressed to external sense as spoken sound to the ear, or as written and printed words to the eye — but containing a meaning or sense addressed to the understanding and only to be seized by introspection. The pupil must call up the corresponding idea by thought, memory, and imagination, or else the word will cease to be a word and remain only a sound or character.

On the other hand, observation of things and movements does not necessarily involve this twofold act of analysis, introspective and objective, but only the latter — the objective analysis. It is granted that we all have frequent occasion to condemn poor methods of instruction as teaching words rather than things. But we admit that we mean empty sounds or characters rather than true words. Our suggestions for the

correct method of teaching amount in this case simply to laying stress on the meaning of the word, and to setting the teaching process on the road of analysis of content rather than form. In the case of words used to store up external observation the teacher is told to repeat and make alive again the act of observation by which the word obtained its original meaning. In the case of a word expressing a relation between facts or events, the pupil is to be taken step by step through the process of reflection by which the idea was built up. Since the word, spoken and written, is the sole instrument by which reason can fix, preserve, and communicate both the data of sense and the relations discovered between them by reflection, no new method in education has been able to supplant in the school the branches, reading and penmanship. But the real improvements in method have led teachers to lay greater and greater stress on the internal factor of the word, on its meaning, and have in manifold ways shown how to repeat the original experiences that gave the meaning to concrete words, and the original comparisons and logical deductions by which the ideas of relations and causal processes arose in the mind and required abstract words to preserve and communicate them.

It has been claimed that it would be better to have first a basis of knowledge of things, and secondarily and subsequently a knowledge of words. But it has been replied to this, that the progress of the child in learning to talk indicates his ascent out of mere impressions into the possession of true knowledge. For he names objects only after he has made some synthesis of his impressions and has formed general ideas. He recognizes the same object under different circumstances of time and place, and also recognizes other objects belonging to the same class by and with names. Hence the use of the word indicates a higher degree of self-activity — the stage of mere impressions without words or signs being a comparatively passive state of mind. What we mean by things first and words afterward, is, therefore, not the apprehension of objects by passive impressions so much as the active investigation and experimenting which come after words are used, and the higher forms of analysis are called into being by that invention of reason known as language, which, as before said, is a synthesis of thing and thought, of outward sign and inward signification.

Rational investigation cannot precede the invention of language any more than blacksmithing can precede the invention of hammers, anvils, and pincers. For language is the necessary tool of thought used in the conduct of the analysis and synthesis of investigation.

Your Committee would sum up these considerations by saying that language rightfully forms the centre of instruction in the elementary school, but that progress in methods of teaching is to be made, as hitherto, chiefly by laying more stress on the internal side of the word, its meaning; using better graded steps to build up the chain of experience or the train of thought that the word expresses.

The first three years' work of the child is occupied mainly with the mastery of the printed and written forms of the words of his colloquial vocabulary; words that he is already familiar enough with as sounds addressed to the ear. He has to become familiar with the new forms addressed to the eye, and it would be an unwise method to require him to learn many new words at the same time that he is learning to recognize his old words in their new shape. But as soon as he has acquired some facility in reading what is printed in the colloquial style, he may go on to selections from standard authors. The literary selections should be graded, and are graded in almost all series of readers used in our elementary schools, in such a way as to bring those containing the fewest words outside of the colloquial vocabulary into the lower books of the series, and increasing the difficulties, step by step, as the pupil grows in maturity. The selections are literary works of art possessing the required organic unity and a proper reflection of this unity in the details, as good works of art must do. But they portray situations of the soul, or scenes of life, or elaborated reflections, of which the child can obtain some grasp through his capacity to feel and think, although in scope and compass they far surpass his range. They are adapted, therefore, to lead him out of and beyond himself, as spiritual guides.

Literary style employs, besides words common to the colloquial vocabulary, words used in a semi-technical sense expressive of fine shades of thought and emotion. The literary work of art furnishes a happy expression for some situation of the soul, or some train of reflection hitherto unutterable in an adequate manner. If the pupil learns this literary production, he finds himself powerfully helped to understand both himself and his fellow-men. The most practical knowledge of all, it will be admitted, is a knowledge of human nature — a knowledge that enables one to combine with his fellow-men, and to share with them the physical and spiritual wealth of the race. Of this high character as humanizing or civilizing, are the favorite works of literature found in the school readers, about one hundred and fifty English and American writers being drawn upon for the material. Such are Shakespeare's speeches of Brutus and Mark Antony, Hamlet's and Macbeth's soliloquies, Milton's L'Allegro and Il Penseroso, Gray's Elegy, Tennyson's Charge of the Light Brigade and Ode on the Death of the Duke of Wellington, Byron's Waterloo, Irving's Rip Van Winkle, Webster's Reply to Hayne, The Trial of Knapp, and Bunker Hill oration, Scott's Lochinvar, Marmion, and Roderick Dhu, Bryant's Thanatopsis, Longfellow's Psalm of Life, Paul Revere, and the Bridge, O'Hara's Bivouac of the Dead, Campbell's Hohenlinden, Collins' How Sleep the Brave, Wolfe's Burial of Sir John Moore, and other fine prose and poetry from Addison, Emerson, Franklin, The Bible, Hawthorne, Walter Scott, Goldsmith, Wordsworth, Swift, Milton, Cooper, Whittier, Lowell, and the rest. The reading and study of fine selections in prose and verse furnish the chief æsthetic training of the elementary school. But this should be re-enforced by some study of photographic or other reproductions of the world's great masterpieces of architecture, sculpture, and painting. The frequent sight of these reproductions is good; the attempt to copy or sketch them with the pencil is better; best of all is an æsthetic lesson on their composition, attempting to describe in words the idea of the whole that gives the work its organic unity, and the devices adopted by the artist to reflect this idea in the details and re-enforce its strength. The æsthetic taste of teacher and pupil can be cultivated by such exercises, and once set on the road of development, this taste may improve through life.

A third phase of language study in the elementary school is formal grammar. The works of literary art in the readers, re-enforced as they ought to be by supplementary reading at home of the whole works from which the selections for the school readers are made, will educate the child in the use of a higher and better English style. Technical grammar never can do this. Only familiarity with fine English works will insure one a good and correct style. But grammar is the science of language, and as the first of the seven liberal arts it has long held sway in school as the disciplinary study *par excellence*. A survey of its educational value, subjective and objective, usually produces the conviction that it is to retain the first place in the future. Its chief objective advantage is, that it shows the structure of language, and the logical forms of subject, predicate, and modifier, thus revealing the essential nature of thought itself, the most important of all objects, because it is self-object. On the subjective or psychological side, grammar demonstrates its title to the first place by its use as a discipline in subtle analysis, in logical division and classification, in the art of questioning, and in the mental accomplishment of making exact definitions. Nor is this an empty, formal discipline, for its subject-matter, language, is a product of the reason of a people, not as individuals, but as a social whole, and the vocabulary holds in its store of words the generalized experience of that people, including sensuous observation and reflection, feeling and emotion, instinct and volition.

No formal labor on a great objective field is ever lost wholly, since at the very least it has the merit of familiarizing the pupil with the contents of some one extensive province that borders on his life, and with which he must come into correlation; but it is easy for any special formal discipline, when continued too long, to paralyze or arrest growth at that stage. The overcultivation of the verbal memory tends to arrest the growth of critical attention and reflection. Memory of accessory details too, so much prized in the school, is also cultivated often at the expense of an insight into the organizing principle of the whole and the casual nexus that binds the parts. So, too, the study of quantity, if carried to excess, may warp the mind into a habit of neglecting quality in its observation and reflection. As there is no subsumption in the quantitative judgment, but only dead equality or inequality (A is equal to or greater or less than B), there is a tendency to atrophy in the faculty of concrete syllogistic reasoning on the part of the person devoted exclusively to mathematics. For the normal syllogism uses judgments wherein the subject is subsumed under the predicate (This is a rose — the individual rose is subsumed under the class rose; Socrates is a man, etc.). Such reasoning concerns individuals in two aspects, first as concrete wholes and secondly as members of higher totalities or classes — species and genera. Thus, too, grammar, rich as it is in its contents, is only a formal discipline as respects the scientific, historic, or literary contents of language, and is indifferent to them. A training for four or five years in parsing and grammatical analysis practiced on literary works of art (Milton, Shakespeare, Tennyson, Scott) is a training of the pupil into habits of indifference toward and neglect of the genius displayed in the literary work of art, and into habits of impertinent and trifling attention to elements employed as material or texture, and a corresponding neglect of the structural form, which alone is the work of the artist. A parallel to this would be the mason's habit of noticing only the brick and mortar, or the stone and cement, in his inspection of the architecture, say of Sir Christopher Wren. A child overtrained to analyze and classify shades of color — examples of this one finds occasionally in a primary school whose specialty is "objective teaching" — might in later life visit an art gallery and make an inventory of colors without getting even a glimpse of a painting as a work of art. Such overstudy and misuse of grammar as one finds in the elementary school, it is feared, exists to some extent in secondary schools and even in colleges, in the work of mastering the classic authors.

Your Committee is unanimous in the conviction that formal grammar should not be allowed to usurp the place of a study of the literary work of art in accordance with literary method. The child can be gradually trained to see the technical "motives" of a poem or prose work of art and to enjoy the æsthetic inventions of the artist. The analysis of a work of art should discover the idea that gives it organic unity; the collision and the complication resulting; the solution and *dénouement*. Of course these things must be reached in the elementary school without even a mention of their technical terms. The subject of the piece is brought out; its reflection in the conditions of the time and place to heighten interest by showing its importance; its second and stronger reflection in the several details of its conflict and struggle; its reflection in the *dénouement* wherein its struggle ends in victory or defeat and the ethical or rational interests are vindicated,— and the results move outward, returning to the environment again in ever-widening circles, — something resembling this is to be found in every work of art, and there are salient features which can be briefly but profitably made subject of comment in familiar language with even the youngest pupils. There is an ethical and an æsthetical content to each work of art. It is profitable to point out both of these in the interest of the child's growing insight into human nature. The ethical should, however, be kept in subordination to the æsthetical, but for the sake of the supreme interests of the ethical itself. Otherwise the study of a work of art degenerates into a goody goody performance, and its effects on the child are to cause a reaction against the moral. The child protects his inner individuality against effacement through external authority by taking an attitude of rebellion against stories with an appended moral. Herein the superior-

ity of the æsthetical in literary art is to be seen. For the ethical motive is concealed by the poet, and the hero is painted with all his brittle individualism and self-seeking. His passions and his selfishness, gilded by fine traits of bravery and noble manners, interest the youth, interest us all. The established social and moral order seems to the ambitious hero to be an obstacle to the unfolding of the charms of individuality. The deed of violence gets done, and the Nemesis is aroused. Now his deed comes back on the individual doer, and our sympathy turns against him and we rejoice in his fall. Thus the æsthetical unity contains within it the ethical unity. The lesson of the great poet or novelist is taken to heart, whereas the ethical announcement by itself might have failed, especially with the most self-active and aspiring of the pupils. Aristotle pointed out in his Poetics this advantage of the æsthetic unity, which Plato in his Republic seems to have missed. Tragedy purges us of our passions, to use Aristotle's expression, because we identify our own wrong inclinations with those of the hero, and by sympathy we suffer with him and see our intended deed returned upon us with tragic effect, and are thereby cured.

Your Committee has dwelt upon the æsthetic side of literature in this explicit manner because they believe that the general tendency in elementary schools is to neglect the literary art for the literary formalities which concern the mechanical material rather than the spiritual form. Those formal studies should not be discontinued, but subordinated to the higher study of literature.

Your Committee reserves the subject of language lessons, composition writing, and what relates to the child's expression of ideas in writing, for consideration under Part 3 of this Report, treating of programme.

B. Arithmetic.

Side by side with language study is the study of mathematics in the schools, claiming the second place in importance of all studies. It has been pointed out that mathematics concerns the laws of time and space — their structural form, so to speak — and hence that it formulates the logical conditions of all matter both in rest and in motion. Be this as it may, the high position of mathematics as the science of all quantity is universally acknowledged. The elementary branch of mathematics is arithmetic, and this is studied in the primary and grammar schools from six to eight years, or even longer. The relation of arithmetic to the whole field of mathematics has been stated (by Comte, Howison, and others) to be that of the final step in a process of calculation, in which results are stated numerically. There are branches that develop or derive quantitative functions: say geometry for spatial forms, and mechanics for movement and rest and the forces producing them. Other branches transform these quantitative functions into such forms as may be calculated in actual numbers; namely, algebra in its common or lower form, and in its higher form as the differential and integral calculus, and the calculus of variations. Arithmetic evaluates or finds the numerical value for the functions thus deduced and transformed. The educational value of arithmetic is thus indicated both as concerns its psychological side and its objective practical uses in correlating man with the world of nature. In this latter respect as furnishing the key to the outer world in so far as the objects of the latter are a matter of direct enumeration,— capable of being counted,— it is the first great step in the conquest of nature. It is the first tool of thought that man invents in the work of emancipating himself from thraldom to external forces. For by the command of number he learns to divide and conquer. He can proportion one force to another, and concentrate against an obstacle precisely what is needed to overcome it. Number also makes possible all the other sciences of nature which depend on exact measurement and exact record of phenomena as to the following items: order of succession, date, duration, locality, environment, extent of sphere of influence, number of manifestations, number of cases of intermittence. All these can be defined accurately only by means of number. The educational value of a branch of study that furnishes the indispensable first step toward all science of nature is obvious. But psychologically its importance further appears in this, that it begins with an important step in analysis; namely, the detachment of the idea of quantity from the concrete whole, which includes quality as well as quantity. To count, one drops the qualitative and considers only the quantitative aspect. So long as the individual differences (which are qualitative in so far as they distinguish one object from another) are considered, the objects cannot be counted together. When counted, the distinctions are dropped out of sight as indifferent. As counting is the fundamental operation of arithmetic, and all other arithmetical operations are simply devices for speed by using remembered countings instead of going through the detailed work again each time, the hint is furnished the teacher for the first lessons in arithmetic. This hint has been generally followed out and the child set at work at first upon the counting of objects so much alike that the qualitative difference is not suggested to him. He constructs gradually his tables of addition, subtraction, and multiplication, and fixes them in his memory. Then he takes his next higher step; namely, the apprehension of the fraction. This is an expressed ratio of two numbers, and therefore a much more complex thought than he has met with in dealing with the simple numbers. In thinking five-sixths, he first thinks five and then six, and holding these two in mind thinks the result of the first modified by the second. Here are three steps instead of one, and the result is not a simple number, but an inference resting on an unperformed operation. This psychological analysis shows the reason for the embarrassment of the child on his entrance upon the study of fractions and the other operations that imply ratio. The teacher finds all his resources in the way of method drawn upon to invent steps and half steps, to aid the pupil to make continuous progress here. All these devices of method consist in steps by which the pupil descends to the simple number and returns to the complex. He turns one of the terms into a qualitative unit, and thus is enabled to use the other as a simple number. The pupil takes the denominator, for example, and makes clear his conception of one-sixth as his qualitative unit, then five-sixths is as clear to him as five oxen. But he has to repeat this return from ratio to simple numbers in each of the elementary operations — addition, subtraction, multiplication, and division, and in the reduction of fractions — and finds the road long and tedious at best. In the case of decimal fractions the psychological process is more complex still; for the pupil has given him one of the terms, the numerator, from which he must mentally deduce the denominator from the position of the decimal point. This doubles the work of reading and recognizing the fractional number. But it makes addition and subtraction of fractions nearly as easy as that of simple numbers and assists also in multiplication of fractions. But division of decimals is a much more complex operation than that of common fractions.

The want of a psychological analysis of these processes has led many good teachers to attempt decimal fractions with their pupils before taking up common fractions. In the end they have been forced to make introductory steps to aid the pupil, and in these steps to introduce the theory of the common fraction. They have by this refuted their own theory.

Besides (*a*) simple numbers and the four operations with them, (*b*) fractions common and decimal, there is (*c*) a third step in number; namely, the theory of powers and roots. It is a further step in ratio; namely, the relation of a simple number to itself as power and root. The mass of material which fills the arithmetic used in the elementary school consists of two kinds of examples: first, those wherein there is a direct application of simple numbers, fractions, and powers; and secondly, the class of examples involving operations in reaching numerical solutions through indirect data and consequently involving more or less transformation of functions. Of this character is most of the so-called higher arithmetic and such problems in the text-book used in the elementary schools as have, not inappropriately, been called (by General Francis A. Walker in his criticism on common-school arithmetic) numerical "conundrums." Their difficulty is not found in the strictly arithmetical part of the process of the solution (the third phase above described), but rather in the transformation of the quantitative function given into the function that can readily be calculated numerically. The transformation of functions belongs strictly to algebra. Teachers who love arithmetic, and who have themselves success in working out the so-called numerical conundrums, defend with much earnestness the current practice which uses so much time for arithmetic. They see in it a valuable training for ingenuity and logical analysis, and believe that the industry which discovers arithmetical ways of transforming the functions given in such problems into plain numerical operations of adding, subtracting, multiplying, or dividing is well bestowed. On the other hand, the critics of this practice contend that there should be no merely formal drill in school for its own sake, and that there should be, always, a substantial content to be gained. They contend that the work of the pupil in transforming quantitative functions by arithmetical methods is wasted, because the pupil needs a more adequate expression than number for this purpose; that this has been discovered in algebra, which enables him to perform with ease such quantitative transformations as puzzle the pupil in arithmetic. They hold, therefore, that arithmetic pure and simple should be abridged and elementary algebra introduced after the numerical operations in powers, fractions, and simple numbers have been mastered, together with their applications to the tables of weights and measures and to percentage and interest. In the seventh year of the elementary course there would be taught equations of the first degree and the solution of arithmetical problems that fall under proportion, or the so-called "rule of three," together with other problems containing complicated conditions — those in partnership, for example. In the eighth year quadratic equations could be learned, and other problems of higher arithmetic solved in a more satisfactory manner than by numerical methods. It is contended that this earlier introduction of algebra, with a sparing use of letters for known quantities, would secure far more mathematical progress than is obtained at present on the part of all pupils, and that it would enable many pupils to go on into secondary and higher education who are now kept back on the plea of lack of preparation in arithmetic, the real difficulty in many cases being a lack of ability to solve algebraic problems by an inferior method.

Your Committee would report that the practice of teaching two lessons daily in arithmetic, one styled "mental," or "intellectual," and the other "written" arithmetic (because its exercises are written out with pencil or pen), is still continued in many schools. By this device the pupil is made to give twice as much time to arithmetic as to any other branch. It is contended by the opponents of this practice, with some show of reason, that two lessons a day in the study of quantity have a tendency to give the mind a bent or set in the direction of thinking quantitatively, with a corresponding neglect of the power to observe, and to reflect upon, qualitative and causal aspects. For mathematics does not take account of causes, but only of equality and difference in magnitude. It is further objected that the attempt to secure what is called thoroughness in the branches taught in the elementary schools is often carried too far; in fact, to such an extent as to produce arrested development (a sort of mental paralysis) in the mechanical and formal stages of growth. The mind, in that case, loses its appetite for higher methods and wider generalizations. The law of apperception, we are told, proves that temporary methods of solving problems should not be so thoroughly mastered as to be used involuntarily, or as a matter of unconscious habit, for the reason that a higher and more adequate method of solution will then be found more difficult to acquire. The more thoroughly a method is learned, the more it becomes part of the mind, and the greater the repugnance of the mind toward a new method. For this reason, parents and teachers discourage young children from the practice of counting on the fingers, believing that it will cause much trouble later to

root out this vicious habit and replace it by purely mental processes. Teachers should be careful, especially with precocious children, not to continue too long in the use of a process that is becoming mechanical; for it is already growing into a second nature, and becoming a part of the unconscious apperceptive process by which the mind reacts against the environment, recognizes its presence, and explains it to itself. The child that has been overtrained in arithmetic reacts apperceptively against his environment chiefly by noticing its numerical relations — he counts and adds; his other apperceptive reactions being feeble, he neglects qualities and causal relations. Another child who has been drilled in recognizing colors apperceives the shades of color to the neglect of all else. A third child, excessively trained in form studies by the constant use of geometric solids, and much practice in looking for the fundamental geometric forms lying at the basis of the multifarious objects that exist in the world, will, as a matter of course, apperceive geometric forms, ignoring the other phases of objects.

It is, certainly, an advance on immediate sense-perception to be able to separate or analyze the concrete, whole impression, and consider the quantity apart by itself. But if arrested mental growth takes place here, the result is deplorable. That such arrest may be caused by too exclusive training in recognizing numerical relations is beyond a doubt.

Your Committee believes that, with the right methods, and a wise use of time in preparing the arithmetic lesson in and out of school, five years are sufficient for the study of mere arithmetic — the five years beginning with the second school year and ending with the close of the sixth year; and that the seventh and eighth years should be given to the algebraic method of dealing with those problems that involve difficulties in the transformation of quantitative indirect functions into numerical or direct quantitative data.

Your Committee, however, does not wish to be understood as recommending the transfer of algebra, as it is understood and taught in most secondary schools, to the seventh year, or even to the eighth year of the elementary school. The algebra course in the secondary school, as taught to the pupils in their fifteenth year of age, very properly begins with severe exercises, with a view to discipline the pupil in analyzing complex literate expressions at sight, and to make him able to recognize at once the factors that are contained in such combinations of quantities. The proposed seventh-grade algebra must use letters for the unknown quantities and retain the numerical form of the known quantities, using letters for these very rarely, except to exhibit the general form of solution, or what, if stated in words, becomes a so-called "rule" in arithmetic. This species of algebra has the character of an introduction or transitional step to algebra proper. The latter should be taught thoroughly in the secondary school. Formerly it was a common practice to teach elementary algebra of this sort in the preparatory schools, and reserve for the college a study of algebra proper. But in this case there was often a neglect of sufficient practice in factoring literate quantities, and, as a consequence, the pupil suffered embarrassment in his more advanced mathematics; for example, in analytical geometry, the differential calculus, and mechanics. The proposition of your Committee is intended to remedy the two evils already named: first, to aid the pupils in the elementary school to solve, by a higher method, the more difficult problems that now find place in advanced arithmetic; and secondly, to prepare the pupil for a thorough course in pure algebra in the secondary school.

Your Committee is of the opinion that the so-called mental arithmetic should be made to alternate with written arithmetic for two years, and that there should not be two daily lessons in this subject.

C. Geography.

The leading branch of the seven liberal arts was grammar, being the first of the *Trivium* (grammar, rhetoric, and logic). Arithmetic, however, led the second division, the *Quadrivium* (arithmetic, geometry, music, and astronomy). We have glanced at the reasons for the place of grammar as leading the humane studies, as well as for the place of arithmetic as leading the nature studies. Following arithmetic, as the second study in importance among the branches that correlate man to nature, is geography. It is interesting to note that the old quadrivium of the Middle Ages included geography, under the title of geometry, as the branch following arithmetic in the enumeration; the subject-matter of their so-called "geometry" being chiefly an abridgment of Pliny's geography, to which were added a few definitions of geometric forms, something like the primary course in geometric solids in our elementary schools. So long as there has been elementary education there has been something of geography included. The Greek education laid stress on teaching the second book of Homer, containing the Catalogue of the Ships and a brief mention of the geography and history of all the Greek tribes that took part in the Trojan War. History remains unseparated from geography and geometry in the Middle Ages. Geography has preserved this comprehensiveness of meaning as a branch of the study in the elementary schools down to the present day. After arithmetic, which treats of the abstract or general conditions of material existence, comes geography, with a practical study of man's material *habitat*, and its relations to him. It is not a simple science by itself, like botany, or geology, or astronomy, but a collection of sciences levied upon to describe the earth as the dwelling-place of man and to explain something of its more prominent features. About one-fourth of the material relates strictly to the geography, about one-half to the inhabitants, their manners, customs, institutions, industries, productions, and the remaining one-fourth to items drawn from the sciences of mineralogy, meteorology, botany, zoölogy, and astronomy. This predominance of the human feature in a study ostensibly relating to physical nature, your Committee considers necessary and entirely justifiable. The child commences with what is nearest to his interests, and proceeds gradually toward what is remote and to be studied for its own sake. It is, therefore, a mistake to suppose that the first phase of geography presented to the child should be the process of continent formation. He must begin with the natural difference of climate, and lands, and waters, and obstacles that separate peoples, and study the methods by which man strives to equalize or overcome these differences by industry and commerce, to unite all places and all people, and make it possible for each to share in the productions of all. The industrial and commercial idea is, therefore, the first central idea in the study of geography in the elementary schools. It leads directly to the natural elements of difference in climate, soil, and productions, and also to those in race, religion, political status, and occupations of the inhabitants, with a view to explain the grounds and reasons for this counter-process of civilization which struggles to overcome the differences. Next comes the deeper inquiry into the process of continent formation, the physical struggle between the process of upheaving or upbuilding of continents and that of their obliteration by air and water; the explanation of the mountains, valleys, and plains, the islands, volcanic action, the winds, the rain-distribution. But the study of cities, their location, the purposes they serve as collecting, manufacturing, and distributing centres, leads most directly to the immediate purpose of geography in the elementary school. From this beginning, and holding to it as a permanent interest, the inquiry into causes and conditions proceeds concentrically to the sources of the raw materials, the methods of their production, and the climatic, geologic, and other reasons that explain their location and their growth.

In recent years, especially through the scientific study of physical geography, the processes that go to the formation of climate, soil, and general configuration of land masses have been accurately determined, and the methods of teaching so simplified that it is possible to lead out from the central idea mentioned to the physical explanations of the elements of geographical difference quite early in the course of study. Setting out from the idea of the use made of the earth by civilization, the pupil in the fifth and sixth years of his schooling (at the age of eleven or twelve) may extend his inquiries quite profitably as far as the physical explanations of land-shapes and climates. In the seventh and eighth year of school much more may be done in this direction. But it is believed that the distinctively human interest connected with geography in the first years of its study should not yield to the purely scientific one of physical processes until the pupil has taken up the study of history.

The educational value of geography, as it is and has been in elementary schools, is obviously very great. It makes possible something like accuracy in the picturing of distant places and events, and removes a large tract of mere superstition from the mind. In the days of newspaper reading one's stock of geographical information is in constant requisition. A war on the opposite side of the globe is followed with more interest in this year than a war near our own borders before the era of the telegraph. The general knowledge of the locations and boundaries of nations, of their status in civilization, and their natural advantages for contributing to the world market, is of great use to the citizen in forming correct ideas from his daily reading.

The educational value of geography is even more apparent if we admit the claims of those who argue that the present epoch is the beginning of an era in which public opinion is organized into a ruling force by the agency of periodicals and books. Certainly neither the newspaper nor the book can influence an illiterate people; they can do little to form opinions where the readers have no knowledge of geography.

As to the psychological value of geography little need be said. It exercises in manifold ways the memory of forms and the imagination; it brings into exercise the thinking power, in tracing back toward unity the various series of causes. What educative value there is in geology, meteorology, zoölogy, ethnology, economics, history, and politics is to be found in the more profound study of geography, and, to a proportionate extent, in the study of its merest elements.

Your Committee is of the opinion that there has been a vast improvement in the methods of instruction in this branch in recent years, due, in large measure, to the geographical societies of this and other countries. At first there prevailed what might be named sailor geography. The pupil was compelled to memrize all the capes and headlands, bays and harbors, mouths of rivers, islands, sounds, and straits around the world. He enlivened this, to some extent, by brief mention of the curiosities and oddities in the way of cataracts, water-gaps, caves, strange animals, public buildings, picturesque costumes, national exaggerations, and such matters as would furnish good themes for sailors' yarns. Little or nothing was taught to give unity to the isolated details furnished in endless number. It was an improvement on this when the method of memorizing capital cities and political boundaries succeeded. With this came the era of map drawing. The study of watersheds and commercial routes, of industrial productions and centres of manufacture and commerce, has been adopted in the better class of schools. Instruction in geography is growing better by the constant introduction of new devices to make plain and intelligible the determining influence of physical causes in producing the elements of difference and the counter-process of industry and commerce by which each difference is rendered of use to the whole world, and each locality made a participator in the productions of all.

D. History.

The next study, ranked in order of value, for the elementary school is history. But, as will be seen, the value of history, both practically and psychologically, is less in the beginning and greater at the end than geography. For it relates to the institutions of men, and especially to the political state and its evolution. While biography narrates the career of the individual, civil history records the careers of nations. The nation has been compared to the individual by persons interested in the educational value of history. Man has two selves, they say, the individual self, and the collective self of the organized state or nation. The study of history is, then, the study of this larger,

corporate, social and civil self. The importance of this idea is thus brought out more clearly in its educational significance. For to learn this civil self is to learn the substantial condition which makes possible the existence of civilized man in all his other social combinations — the family, the Church, and the manifold associated activities of civil society. For the state protects these combinations from destruction by violence. It defines the limits of individual and associated effort, within which each endeavor reenforces the endeavors of all, and it uses the strength of the whole nation to prevent such actions as pass beyond these safe limits and tend to collision with the normal action of the other individuals and social units. Hobbes called the state a Leviathan, to emphasize its stupendous individuality and organized self-activity. Without this, he said, man lives in a state of "constant war, fear, poverty, filth, ignorance, and wretchedness; within the state dwell peace, security, riches, science, and happiness." The state is the collective man who "makes possible the rational development of the individual man, like a mortal God, subduing his caprice and passion and compelling obedience to law, developing the ideas of justice, virtue, and religion, creating property and ownership, nurture and education." The education of the child into a knowledge of this higher self begins early within the nurture of the family. The child sees a policeman or some town officer, some public building, a court house or a jail; he sees or hears of an act of violence, a case of robbery or murder followed by arrest of the guilty. The omnipresent higher self, which has been invisible hitherto, now becomes visible to him in its symbols and still more in its acts.

History in school, it is contended, should be the special branch for education in the duties of citizenship. There is ground for this claim. History gives a sense of belonging to a higher social unity which possesses the right of absolute control over person and property in the interest of the safety of the whole. This, of course, is the basis of citizenship; the individual must feel this or see this solidarity of the state and recognize its supreme authority. But history shows the collisions of nations, and the victory of one political ideal accompanied by the defeat of another. History reveals an evolution of forms of government that are better and better adapted to permit individual freedom, and the participation of all citizens in the administration of the government itself.

People who make their own government have a special interest in the spectacle of political evolution as exhibited in history. But it must be admitted that this evolution has not been well presented by popular historians. Take, for instance, the familiar example of old-time pedagogy, wherein the Roman republic was conceived as a freer government than the Roman empire that followed it, by persons apparently misled by the ideas of representative self-government associated with the word *republic*. It was the beginning of a new epoch when this illusion was dispelled, and the college student became aware of the true Roman meaning of *republic*, namely, the supremacy of an oligarchy on the Tiber that ruled distant provinces in Spain, Gaul, Asia Minor, Germany, and Africa, for its selfish ends and with an ever-increasing arrogance. The people at home in Rome, not having a share in the campaigns on the borderland, did not appreciate the qualities of the great leaders who, like Cæsar, subdued the nations by forbearance, magnanimity, trust, and the recognition of a sphere of freedom secured to the conquered by the Roman civil laws, which were rigidly enforced by the conqueror, as much as by the violence of arms. The change from republic to empire meant the final subordination of this tyrannical Roman oligarchy, and the recognition of the rights of the provinces to Roman freedom. This illustration shows how easily a poor teaching of history may pervert its good influence or purpose into a bad one. For the Roman monarchy under the empire secured a degree of freedom never before attained under the republic, in spite of the election of such tyrants as Nero and Caligula to the imperial purple. The civil service went on as usual administering the affairs of distant countries, educating them in Roman jurisprudence, and cultivating a love for accumulating private property. Those countries had before lived communistically after the style of the tribe or at best of the village community. Roman private property in land gave an impulse to the development of free individuality such as had always been impossible under the social stage of development known as the village community.

To teach history properly is to dispel this shallow illusion which flatters individualism, and to open the eyes of the pupil to the true nature of freedom, namely, the freedom through obedience to just laws enforced by a strong government.

Your Committee has made this apparent digression for the sake of a more explicit statement of its conviction of the importance of teaching history in a different spirit from that of abstract freedom, which sometimes means anarchy, although they admit the possibility of an opposite extreme, the danger of too little stress on the progressive element in the growth of nations, and its manifestation in new and better political devices for representing all citizens without weakening the central power.

That the history of one's own nation is to be taught in the elementary school seems fixed by common consent. United States history includes first a sketch of the epoch of discoveries and next of the epoch of colonization. This, fortunately, suits the pedagogic requirements. For the child loves to approach the stern realities of a firmly established civilization through its stages of growth by means of individual enterprise. Here is the use of biography as introduction to history. It treats of exceptional individuals whose lives bring them in one way or another into national or even world-historical relations. They throw light on the nature and necessity of governments, and are in turn illuminated by the light thrown back on them by the institutions which they promote or hinder. The era of semi-private adventure with which American history begins is admirably adapted for study by the pupil in the elementary stage of his education. So, too, the next epoch, that of colonization. The pioneer is a degree nearer to civilization than is the explorer and discoverer. In the colonial history the pupil interests himself in the enterprise of aspiring individualities, in their conquest over obstacles of climate and soil; their conflicts with the aboriginal population; their choice of land for settlement; the growth of their cities; above all, their several attempts and final success in forming a constitution securing local self-government. An epoch of growing interrelation of the colonies succeeds, a tendency to union on a large scale due to the effect of European wars which involved England, France, and other countries, and affected the relations of their colonies in America. This epoch, too, abounds in heroic personalities, like Wolfe, Montcalm, and Washington, and perilous adventures, especially in the Indian warfare.

The fourth epoch is the Revolution, by which the colonies through joint effort secured their independence and afterward their union as a nation. The subject grows rapidly more complex, and tasks severely the powers of the pupils in the eighth year of the elementary school. The formation of the Constitution, and a brief study of the salient features of the Constitution itself, conclude the study of the portion of the history of the United States that is sufficiently remote to be treated after the manner of an educational classic. Everything up to this point stands out in strong individual outlines, and is admirably fitted for that elementary course of study. Beyond this point, the War of 1812 and the War of the Rebellion, together with the political events that led to it, are matters of memory with the present generation of parents and grandparents, and are, consequently, not so well fitted for intensive study in school as the already classic period of our history. But these later and latest epochs may be, and will be, read at home not only in the text-book on history used in the schools, but also in the numerous sketches that appear in newspapers, magazines, and in more pretentious shapes. In the intensive study which should be undertaken of the classic period of our history, the pupil may be taught the method appropriate to historical investigation, the many points of view from which each event ought to be considered. He should learn to discriminate between the theatrical show of events and the solid influences that move underneath as ethical causes. Although he is too immature for very far-reaching reflections, he must be helped to see the causal processes of history. Armed with this discipline in historic methods, the pupil will do all of his miscellaneous reading and thinking in this province with more adequate intellectual reaction than was possible before the intensive study carried on in school.

The study of the outlines of the Constitution, for ten or fifteen weeks in the final year of the elementary school, has been found of great educational value. Properly taught, it fixes the idea of the essential threefoldness of the constitution of a free government and the necessary independence of each constituent power, whether legislative, judicial, or executive. This and some idea of the manner and mode of filling the official places in these three departments, and of the character of the duties with which each department is charged, lay foundations for an intelligent citizenship.

Besides this intensive study of the history of the United States in the seventh and eighth years, your Committee would recommend oral lessons on the salient points of general history, taking a full hour of sixty minutes weekly — and preferably all at one time — for the sake of the more systematic treatment of the subject of the lesson and the deeper impression made on the mind of the pupil.

E. Other branches.

Your Committee has reviewed the staple branches of the elementary course of study in the light of their educational scope and significance. Grammar, literature, arithmetic, geography, and history are the five branches upon which the disciplinary work of the elementary school is concentrated. Inasmuch as reading is the first of the scholastic arts, it is interesting to note that the whole elementary course may be described as an extension of the process of learning the art of reading. First comes the mastering of the colloquial vocabulary in printed and script forms. Next come five incursions into the special vocabularies required (*a*) in literature to express the fine shades of emotion and the more subtle distinctions of thought, (*b*) the technique of arithmetic, (*c*) of geography, (*d*) of grammar, (*e*) of history.

In the serious work of mastering these several technical vocabularies the pupil is assigned daily tasks that he must prepare by independent study. The class exercise or recitation is taken up with examining and criticising the pupil's oral statements of what he has learned, especial care being taken to secure the pupil's explanation of it in his own words. This requires paraphrases and definitions of the new words and phrases used in technical and literary senses, with a view to insure the addition to the mind of the new ideas corresponding to the new words. The misunderstandings are corrected and the pupil set on the way to use more critical alertness in the preparation of his succeeding lessons. The pupil learns as much by the recitations of his fellow-pupils as he learns from the teacher, but not the same things. He sees in the imperfect statements of his classmates that they apprehended the lesson with different presuppositions and consequently have seen some phases of the subject that escaped his observation, while they in turn have missed points which he had noticed quite readily. These different points of view become more or less his own, and he may be said to grow by adding to his own mind the minds of others.

It is clear that there are other branches of instruction that may lay claim to a place in the course of study in the elementary school; for example, the various branches of natural science, vocal music, manual training, physical culture, drawing, etc.

Here the question of another method of instruction is suggested. There are lessons that require previous preparation by the pupil himself — there are also lessons that may be taken up without such preparation and conducted by the teacher, who leads the exercise and furnishes a large part of the information to be learned, enlisting the aid of members of the

class for the purpose of bringing home the new material to their actual experience. Besides these, there are mechanical exercises for purposes of training, such as drawing, penmanship, and calisthenics.

In the first place, there is industrial and æsthetic drawing, which should have a place in all elementary school work. By it is secured the training of the hand and eye. Then, too, drawing helps in all the other branches that require illustration. Moreover, if used in the study of the great works of art in the way hereinbefore mentioned, it helps to cultivate the taste and prepares the future workman for a more useful and lucrative career, inasmuch as superior taste commands higher wages in the finishing of all goods.

Natural science claims a place in the elementary school not so much as a disciplinary study side by side with grammar, arithmetic, and history, as a training in habits of observation and in the use of the technique by which such sciences are expounded. With a knowledge of the technical terms and some training in the methods of original investigation employed in the sciences, the pupil broadens his views of the world and greatly increases his capacity to acquire new knowledge. For the pupil who is unacquainted with the technique of science has to pass without mental profit the numerous scientific allusions and items of information which more and more abound in all our literature, whether of an ephemeral or a permanent character. In an age whose proudest boast is the progress of science in all domains, there should be in the elementary school, from the first, a course in the elements of the sciences. And this is quite possible; for each science possesses some phases that lie very near to the child's life. These familiar topics furnish the doors through which the child enters the various special departments. Science, it is claimed, is nothing if not systematic. Indeed, science itself may be defined as the interpretation of each fact through all other facts of a kindred nature. Admitting that this is so, it is no less true that pedagogic method begins with the fragmentary knowledge possessed by the pupil and proceeds to organize it and build it out systematically in all directions. Hence any science may be taken up best on the side nearest the experience of the pupil and the investigation continued until the other parts are reached. Thus the pedagogical order is not always the logical or scientific order. In this respect it agrees with the order of discovery, which is usually something quite different from the logical order; for that is the last thing discovered. The natural sciences have two general divisions: one relating to inorganic matter, as physics and chemistry, and one relating to organic, as botany and zoölogy. There should be a spiral course in natural science, commencing each branch with the most interesting phases to the child. A first course should be given in botany, zoölogy, and physics, so as to treat of the structure and uses of familiar plants and animals, and the explanation of physical phenomena as seen in the child's playthings, domestic machines, etc. A second course, covering the same subjects, but laying more stress on classification and functions, will build on to the knowledge already acquired from the former lessons and from his recently acquired experience. A third course of weekly lessons, conducted by the teacher as before in a conversational style, with experiments and with a comparison of the facts of observation already in the possession of the children, will go far to helping them to an acquisition of the results of natural science. Those of the children specially gifted for observation in some one or more departments of nature will be stimulated and encouraged to make the most of their gifts.

In the opinion of your committee, there should be set apart a full hour each week for drawing and the same amount for oral lessons in natural science.

The oral lessons in history have already been mentioned. The spiral course, found useful in natural science because of the rapid change in capacity of comprehension by the pupil from his sixth to his fourteenth year, will also be best for the history course, which will begin with biographical adventures of interest to the child, and possessing an important historical bearing. These will proceed from the native land first to England, the parent country, and then to the classic civilizations (Greece and Rome being, so to speak, the grandparent countries of the American colonies). These successive courses of oral lessons adapted respectively to the child's capacity will do much to make the child well informed on this topic. Oral lessons should never be mere lectures, but more like Socratic dialogues, building up a systematic knowledge partly from what is already known, partly by new investigations, and partly by comparison of authorities.

The best argument in favor of weekly oral lessons in natural science and general history is the actual experiences of teachers who have for some time used the plan. It has been found that the lessons in botany, zoölogy, and physics give the pupil much aid in learning his geography, and other lessons relating to nature, while the history lessons assist very much his comprehension of literature, and add interest to geography.

It is understood by your Committee that the lessons in physiology and hygiene (with special reference to the effects of stimulants and narcotics) required by State laws should be included in this oral course in natural science. Manual training, so far as the theory and use of the tools for working in wood and iron are concerned, has just claims on the elementary school for a reason similar to that which admits natural science. From science have proceeded useful inventions for the aid of all manner of manufactures and transportation. The child of to-day lives in a world where machinery is constantly at his hand. A course of training in wood- and iron-work, together with experimental knowledge of physics or natural philosophy, makes it easy for him to learn the management of such machines. Sewing and cookery have not the same, but stronger claims for a place in school. One-half day in each week for one-half a year each in the seventh and eighth grades will suffice for manual training, the sewing and cookery being studied by the girls, and the wood- and iron-work by the boys. It should be mentioned, however, that the advocates of manual training in iron- and wood-work recommend these branches for secondary schools, because of the greater maturity of body, and the less likelihood to acquire wrong habits of manipulation, in the third period of four years of school.

Vocal music has long since obtained a well-established place in all elementary schools. The labors of two generations of special teachers have reduced the steps of instruction to such simplicity that whole classes may make as regular progress in reading music as in reading literature.

In regard to physical culture your Committee is agreed that there should be some form of special daily exercises amounting in the aggregate to one hour each week, the same to include the main features of calisthenics, and German, Swedish, or American systems of physical training, but not to be regarded as a substitute for the old-fashioned recess, established to permit the free exercise of the pupils in the open air. Systematic physical training has for its object rather the will training than recreation, and this must not be forgotten. To go from a hard lesson to a series of calisthenic exercises is to go from one kind of will training to another. Exhaustion of the will should be followed by the caprice and wild freedom of the recess. But systematic physical exercise has its sufficient reason in its aid to a graceful use of the limbs, its development of muscles that are left unused or rudimentary unless called forth by special training, and for the help it gives to the teacher in the way of school discipline.

Your Committee would mention in this connection instruction in morals and manners, which ought to be given in a brief series of lessons each year with a view to build up in the mind a theory of the conventionalities of polite and pure-minded society. If these lessons are made too long or too numerous, they are apt to become offensive to the child's mind. It is of course understood by your Committee that the substantial moral training of the school is performed by the discipline rather than by the instruction in ethical theory. The child is trained to be regular and punctual, and to restrain his desire to talk and whisper — in these things gaining self-control day by day. The essence of moral behavior is self-control. The school teaches good behavior. The intercourse of a pupil with his fellows without evil words or violent actions is insisted on and secured. The higher moral qualities of truth-telling and sincerity are taught in every class exercise that lays stress on accuracy of statement.

Your Committee has already discussed the importance of teaching something of algebraic processes in the seventh and eighth grades with the view to obtaining better methods of solving problems in advanced arithmetic; a majority of your Committee are of the opinion that formal English grammar should be discontinued in the eighth year, and the study of some foreign language, preferably that of Latin, substituted. The educational effect on an English-speaking pupil of taking up a language which, like Latin, uses inflections instead of prepositions, and which further differs from English by the order in which its words are arranged in the sentence, is quite marked, and a year of Latin places a pupil by a wide interval out of the range of the pupil who has continued English grammar without taking up Latin. But the effect of the year's study of Latin increases the youth's power of apperception in very many directions by reason of the fact that so much of the English vocabulary used in technical vocabularies, like those of geography, grammar, history, and literature, is from a Latin source, and besides there are so many traces in the form and substance of human learning of the hundreds of years when Latin was the only tongue in which observation and reflection could be expressed.

Your Committee refers to the programme given later in this report for the details of co-ordinating these several branches already recommended.

The difference between elementary and secondary studies.

In recommending the introduction of algebraic processes in the seventh and eighth years — as well as in the recommendation just now made to introduce Latin in the eighth year of the elementary course — your Committee has come face to face with the question of the intrinsic difference between elementary and secondary studies.

Custom has placed algebra, geometry, the history of English literature, and Latin in the rank of secondary studies; also general history, physical geography, and the elements of physics and chemistry. In a secondary course of four years trigonometry may be added to the mathematics; some of the sciences whose elements are used in physical geography may be taken up separately in special treatises, as geology, botany, and physiology. There may be also a study of whole works of English authors, as Shakespeare, Milton, and Scott. Greek is also begun in the second or third year of the secondary course. This is the custom in most public high schools. But in private secondary schools Latin is begun earlier, and so, too, Greek, algebra, and geometry. Sometimes geometry is taken up before algebra, as is the custom in German schools. These arrangements are based partly on tradition, partly on the requirements of higher institutions for admission, and partly on the ground that the intrinsic difficulties in these studies have fixed their places in the course of study. Of those who claim that there is an intrinsic reason for the selection and order of these studies, some base their conclusions on experience in conducting pupils through them, others on psychological grounds. The latter contend, for example, that algebra deals with general forms of calculation, while arithmetic deals with the particular instances of calculation. Whatever deals with the particular instance is relatively elementary, whatever deals with the general form is relatively secondary. In the expression $a+b=c$ algebra indicates the form of all addition. This arithmetic cannot do, except in the form of a verbal rule describing the steps of the operation: its examples are all special instances falling under the general form given in algebra. If, therefore, arithmetic is an elementary branch, algebra is relatively to it a secondary branch. So, too, geometry, though not directly based on arithmetic, has to presuppose an acquaintance with it when it reduces spatial functions into numerical forms, as, for example, in the measurement of surfaces and solids, and in

ascertaining the ratio of the circumference to the radius, and of the hypothenuse to the two other sides of the right-angled triangle. Geometry, moreover, deals with necessary relations; its demonstrations reach universal and necessary conclusions, holding good not merely in such material shapes as we have met with in actual experience, but with all examples possible, past, present, or future. Such knowledge transcending experience is intrinsically secondary as compared with the first acquaintance with geometric shapes in concrete examples.

In the case of geometry it is claimed by some that what is called "inventional geometry" may be properly introduced into the elementary grades. By this some mean the practice with blocks in the shape of geometric solids, and the construction of different figures from the same; others mean the rediscovery by the pupil for himself of the necessary relations demonstrated by Euclid. The former — exercises of construction with blocks — are well enough in the kindergarten, where they assist in learning number, as well as in the analysis of material forms. But its educational value is small for pupils advanced into the use of books. The original discovery of Euclid's demonstrations, on the other hand, belongs more properly to higher education than to elementary. In the geometrical text-books, recently introduced into secondary schools, there is so much of original demonstration required that the teacher is greatly embarrassed on account of the differences in native capacity for mathematics that develop among the pupils of the same class in solving the problems of invention. A few gifted pupils delight in the inventions, and develop rapidly in power, while the majority of the class use too much time over them, and thus rob the other branches of the course of study, or else fall into the bad practice of getting help from others in the preparation of their lessons. A few in every class fall hopelessly behind and are discouraged. The result is an attempt on the part of the teacher to correct the evil by requiring a more thorough training in the mathematical studies preceding, and the consequent delay of secondary pupils in the lower grades of the course in order to bring up their "inventional geometry." Many, discouraged, fail to go on; many more fail to reach higher studies because unable to get over the barrier unnecessarily placed before them by teachers who desire that no pupils except natural geometricians shall enter into higher studies.

Physical geography in its scientific form is very properly made a part of the secondary course of study. The pupil in his ninth year of work can profitably acquire the scientific technique of geology, botany, zoölogy, meteorology, and ethnology, and in the following years take up those sciences separately and push them further, using the method of actual investigation. The subject-matter of physical geography is of very high interest to the pupil who has studied geography in the elementary grades after an approved method. It takes up the proximate grounds and causes for the elements of difference on the earth's surface, already become familiar to him through his elementary studies, and pushes them back into deeper, simpler, and more satisfactory principles. This study performs the work also of correlating the sciences that relate to organic nature by showing their respective uses to man. From the glimpses which the pupil gets of mineralogy, geology, botany, zoölogy, ethnology, and meteorology in their necessary connection as geographic conditions he sees the scope and grand significance of those separate inquiries. A thirst is aroused in him to pursue his researches into their domains. He sees, too, the borderlands in which new discoveries may be made by the enterprising explorer.

Physics, including what was called until recently "natural philosophy," after Newton's *Principia* (*Philosophiæ naturalis principia mathematica*), implies more knowledge of mathematics for its thorough discussion than the secondary pupil is likely to possess. In fact, the study of this branch in college thirty years ago was crippled by the same cause. It should follow the completion of analytical geometry. Notwithstanding this, a very profitable study of this subject may be made in the second year of the high school or preparatory school, although the formulas can then be understood in so far as they imply elementary algebra only. The pupil does not get the most exact notions of the quantitative laws that rule matter in its states of motion and equilibrium, but he does see the action of forces as qualitative elements of phenomena, and understand quite well the mechanical inventions by which men subdue them for his use and safety. Even in the elementary grades the pupil can seize very many of these qualitative aspects and learn the explanation of the mechanical phenomena of nature, and other applications of the same principles in invention, as, for example, gravitation in falling bodies: its measurement by the scales; the part it plays in the pump, the barometer, the pendulum; cohesion in mud, clay, glue, paste, mortar, cement, etc.; capillary attraction in lamp-wicks, sponges, sugar, the sap in plants; the applications of lifting by the lever, pulley, inclined plane, wedge, and screw; heat in the sun, combustion, friction, steam, thermometer, conduction, clothing, cooking, etc.; the phenomena of light, electricity, magnetism, and the explanation of such mechanical devices as spectacles, telescopes, microscopes, prisms, photographic cameras, electric tension in bodies, lightning, mariner's compass, horseshoe magnet, the telegraph, the dynamo. This partially qualitative study of forces and mechanical inventions has the educational effect of enlightening the pupil, and emancipating him from the network of superstition that surrounds him in the child world, partly of necessity and partly by reason of the illiterate adults that he sometimes meets with in the persons of nurses, servants, and tradespeople, whose occupations have more attraction for him than those of cultured people. The fairy world is a world of magic, of immediate interventions of supernatural spiritual beings, and while this is proper enough for the child up to the time of the school, and in a lessening degree for some time after, it is only negative and harmful in adult manhood and womanhood. It produces arrested development of powers of observation and reflection in reference to phenomena, and stops the growth of the soul at the infantine stage of development. Neither is this infantine stage of wonder and magic more religious than the stage of disillusion through the study of mathematics and physics. It is the arrest of religious development, also, at the stage of fetichism. The highest religion, that of pure Christianity, sees in the world infinite mediations, all for the purpose of developing independent individuality; the perfection of human souls not only in one kind of piety, namely, that of the heart, but in the piety of the intellect that beholds truth, the piety of the will that does good deeds wisely, the piety of the senses that sees the beautiful and realizes it in works of art. This is the Christian idea of divine Providence as contrasted with the heathen idea of that Providence, and the study of natural philosophy is an essential educational requisite in its attainment, although a negative means. Of course there is danger of replacing the spiritual idea of the divine by the dynamical or mechanical idea, and thus arresting the mind at the stage of pantheism instead of fetichism. But this danger can be avoided by further education through secondary into higher education, whose entire spirit and method are comparative and philosophical in the best sense of the term. For higher education seems to have as its province the correlation of the several branches of human learning in the unity of the spiritual view furnished by religion to our civilization. By it one learns to see each branch, each science or art or discipline, in the light of all the others. This higher or comparative view is essential to any completeness of education, for it alone prevents the one-sidedness of hobbies, or "fads," as they are called in the slang of the day. It prevents also the bad effects that flow from the influence of what are termed "self-educated men," who for the most part carry up with them elementary methods of study, or at best, secondary methods, which accentuate the facts and relations of natural and spiritual phenomena, but do not deal with their higher correlations. The comparative method cannot, in fact, be well introduced until the student is somewhat advanced, and has already completed his elementary course of study dealing with the immediate aspects of the world, and his secondary course dealing with the separate formal and dynamical aspects that lie next in order behind the facts of first observation. Higher education in a measure unifies these separate formal and dynamic aspects, corrects their one-sidedness, and prevents the danger of what is so often noted in the self-educated men who unduly exaggerate some one of the subordinate aspects of the world and make it a sort of first principle.

Here your Committee finds in its way the question of the use of the full scientific method in the teaching of science in the elementary school. The true method has been called the method of investigation, but that method as used by the child is only a sad caricature of the method used by the mature scientific man, who has long since passed through the fragmentary observation and reflection that prevail in the period of childhood, as well as the tendencies to exaggeration of the importance of one or another branch of knowledge at the expense of the higher unity that correlates all; an exaggeration that manifests itself in the possession and use of a hobby. The ideal scientific man has freed himself from obstacles of this kind, whether psychological or objective. What astronomical observers call the subjective coefficient must be ascertained and eliminated from the record that shows beginnings, endings, and rates. There is a possibility of perfect specialization in a scientific observer only after the elementary and secondary attitudes of mind have been outgrown. An attempt to force the child into the full scientific method by specialization would cause an arrest of his development in the other branches of human learning outside of his specialty. He could not properly inventory the data of his own special sphere unless he knew how to recognize the defining limits or boundaries that separate his province from its neighbors. The early days of science abounded in examples of confusion of provinces in the inventories of their data. It is difficult, even now, to decide where physics and chemistry leave off, and biology begins.

Your Committee does not attempt to state the exact proportion in which the child, at his various degrees of advancement, may be able to dispense with the guiding influence of teacher and text-book in his investigations, but they protest strongly against the illusion under which certain zealous advocates of the early introduction of scientific method seem to labor. They ignore in their zeal the deduction that is to be made for the guiding hand of the teacher, who silently furnishes to the child the experience that he lacks, and quietly directs his special attention to this or to that phase, and prevents him from hasty or false generalization as well as from undue exaggeration of single facts or principles. Here the teacher adds the needed scientific outlook which the child lacks, but which the mature scientist possesses for himself.

It is contended by some that the scientific frame of mind is adapted only to science, but not to art, literature, and religion, which have something essential that science does not reach; not because of the incompleteness of the sciences themselves, but because of the attitude of the mind assumed in the observation of nature. In analytic investigation there is isolation of parts one from another, with a view to find the sources of the influences which produce the phenomena shown in the object. The mind brings everything to the test of this idea. Every phenomenon that exists comes from beyond itself, and analysis will be able to trace the source.

Now, this frame of mind, which insists on a foreign origin of all that goes to constitute an object, debars itself in advance from the province of religion, art, and literature as well as of philosophy. For self-determination, personal activity, is the first principle assumed by religion, and it is tacitly assumed by art and literature, Classic and Christian. The very definition of philosophy implies this, for it is the attempt to explain the world by the assumption of a first principle, and to show that all classes of objects imply that principle as ultimate presupposition. According to this view it is important not to attempt to hasten the use of a strictly scientific method on the part of the child. In his first years he is acquiring the results of civilization rather as an outfit of habits, usages, and traditions than as a scientific discovery. He cannot be expected to stand

over against the culture of his time, and challenge one and all of its conventionalities to justify themselves before his reason. His reason is too weak. He is rather in the imitation stage of mind than in that of criticism. He will not reach the comparative or critical method until the era of higher education.

However this may be, it is clear that the educational value of science and its method is a very important question, and that on it depends the settlement of the question where specialization may begin. To commence the use of the real scientific method would imply a radical change also in methods from the beginning. This may be realized by considering the hold which even the kindergarten retains upon symbolism and upon art and literature. But in the opinion of a majority of your Committee natural science itself should be approached, in the earliest years of the elementary school, rather in the form of results with glimpses into the methods by which these results were reached. In the last two years (the seventh and eighth) there may be some strictness of scientific form and an exhibition of the method of discovery. The pupil, too, may to some extent put this method in practice himself. In the secondary school there should be some laboratory work. But the pupil cannot be expected to acquire for himself fully the scientific method of dealing with nature until the second part of higher education — its post-graduate work. Nevertheless this good should be kept in view from the first year of the elementary school, and there should be a gradual and continual approach to it.

In the study of general history appears another branch of the secondary course. History of the native land is assumed to be an elementary study. History of the world is certainly a step further away from the experience of the child. It is held by some teachers to be in accordance with proper method to begin with the foreign relations of one's native land and to work outward to the world-history. The European relations involved in the discovery and colonization of America furnish the only explanation to a multitude of questions that the pupil has started in the elementary school. He should move outward from what he has already learned, by the study of a new concentric circle of grounds and reasons, according to this view. This, however, is not the usual course taken. On beginning secondary history the pupil is set back face to face with the period of tradition, just when historic traces first make their appearance. He is, by this arrangement, broken off from the part of history that he has become acquainted with, and made to grapple with that period which has no relation to his previous investigations. It is to be said, however, that general history lays stress on the religious thread of connection, though less now than formerly. The world history is a conception of the great Christian thinker, St. Augustine, who held that the world and its history is a sort of antiphonic hymn, in which God reads his counsels, and the earth and man read the responses. He induced Orosius, his pupil, to sketch a general history in the spirit of his view. It was natural that the Old Testament histories, and especially the chapters of Genesis, should furnish the most striking part of its contents. This general history was connected with religion, and brought closer to the experience of the individual than the history of his own people. To commence history with the Garden of Eden, the Fall of Man, and the Noachian Deluge was to begin with what was most familiar to all minds, and most instructive, because it concerned most nearly the conduct of life. Thus religion furnished the apperceptive material by which the early portions of history were recognized, classified, and made a part of experience.

Now that studies in archæology, especially those in the Nile and Euphrates valleys, are changing the chronologies and the records of early times and adding new records of the past, bringing to light national movements and collisions of peoples, together with data by which to determine the status of their industrial civilization, their religious ideas, and the form of their literature and art, the concentric arrangement of all this material around the history of the chosen people as a nucleus is no longer possible. The question has arisen, therefore, whether general history should not be rearranged for the secondary school, and made to connect with American history for apperceptive material rather than with Old Testament history. To this it has been replied with force that the idea of a world history, as St. Augustine conceived it, is the noblest educative ideal ever connected with the subject of history. Future versions of general history will not desert this standpoint, we are told, even if they take as their basis that of ethnology and anthropology, for these, too, will exhibit a plan in human history — an educative principle that leads nations toward freedom and science, because the Creator of nature has made it, in its fundamental constitution, an evolution or progressive development of individuality. Thus the idea of divine Providence is retained, though made more comprehensive by bringing the whole content of natural laws within his will as his method of work.

These considerations, we are reminded by the partisans of humanity studies, point back to the educative value of history as corrective of the one-sidedness of the method of science. Science seeks explanation in the mechanical conditions of, and impulses received from, the environment, while history keeps its gaze fixed on human purposes, and studies the genesis of national actions through the previous stages of feelings, convictions, and conscious ideas. In history the pupil has for his object self-activity, reaction against environment, instead of mechanism, or activity through another.

The history of English literature is another study of the secondary school. It is very properly placed beyond the elementary school, for as taught it consists largely of the biographies of men of letters. The pupils who have not yet learned any great work of literature should not be pestered with literary biography, for at that stage the greatness of the men of letters cannot be seen. Plutarch makes great biographies because he shows heroic struggles and great deeds. The heroism of artists and poets consists in sacrificing all for the sake of their creations. The majority of them come off sadly at the hands of the biographer, for the reason that the very sides of their lives are described which they had slighted and neglected for the sake of the Muses. The prophets of Israel did not live in city palaces, but in caves; they did not wear fine raiment, nor feed sumptuously, nor conform to the codes of polite society. They were no courtiers when they approached the king. They neglected all the other institutions — family, productive industry, and state — for the sake of one, the Church, and even that not the established ceremonial of the people, but a higher and more direct communing with Jehovah. So with artists and men of letters, it is more or less the case, that the institutional side of their lives is neglected, or unsymmetrical, or if this is not the case, it will be found prosaic and uneventful, throwing no light on their matchless productions.

For these reasons, should not the present use of literary biography as it exists in secondary schools, and is gradually making its way into elementary schools, be discouraged, and the time now given to it devoted to the study of literary works of art? It will be admitted that the exposure of the foibles of artists has an immoral tendency on youth: for example, one affects to be a poet, and justifies laxity and self-indulgence through the example of Byron. Those who support this view hold that we should not dignify the immoral and defective side of life by making it a branch of study in school.

Correlation by synthesis of studies.

Your Committee would mention another sense in which the expression correlation of studies is sometimes used. It is held by advocates of an artificial centre of the course of study. They use, for example, De Foe's Robinson Crusoe for a reading exercise, and connect with it the lessons in geography and arithmetic. It has been pointed out by critics of this method that there is always danger of covering up the literary features of the reading matter under accessories of mathematics and natural science. If the material for other branches is to be sought for in connection with the literary exercise, it will distract the attention from the poetic unity. On the other hand, arithmetic and geography cannot be unfolded freely and comprehensively if they are to wait on the opportunities afforded in a poem or novel for their development. A correlation of this kind, instead of being a deeper correlation, such as is found in all parts of human learning by the studies of the college and university, is rather a shallow and uninteresting kind of correlation, that reminds one of the system of mnemonics, or artificial memory, which neglects the association of facts and events with their causes and the history of their evolution, and looks for unessential quips, puns, or accidental suggestions with a view to strengthening the memory. The effect of this is to weaken the power of systematic thinking which deals with essential relations, and substitute for it a chaotic memory that ties together things through false and seeming relations, not of the things and events, but of the words that denote them.

The correlation of geography and arithmetic and history in and through the unity of a work of fiction is at best an artificial correlation, which will stand in the way of the true objective correlation. It is a temporary scaffolding made for school purposes. Instruction should avoid such temporary structures as much as possible, and when used they should be only used for the day, and not for the year, because of the danger of building up an apperceptive centre in the child's mind that will not harmonize with the true apperceptive centre required by the civilization. The story of Robinson Crusoe has intense interest to the child as a lesson in sociology, showing him the helplessness of isolated man and the re-enforcement that comes to him through society. It shows the importance of the division of labor. All children should read this book in the later years of the elementary course, and a few profitable discussions may be had in school regarding its significance. But De Foe painted in it only the side of adventure that he found in his countrymen in his epoch, England after the defeat of the Armada having taken up a career of conquest on the seas, ending by colonization and a world commerce. The liking for adventure continues to this day among all Anglo-Saxon peoples, and beyond other nationalities there is in English-speaking populations a delight in building up civilization from the very foundation. This is only, however, one phase of the Anglo-Saxon mind. Consequently the history of Crusoe is not a proper centre for a year's study in school. It omits cities, governments, the world commerce, the international process, the Church, the newspaper and book from view, and they are not even reflected in it.

Your Committee would call attention in this connection to the importance of the pedagogical principle of analysis and isolation as preceding synthesis and correlation. There should be rigid isolation of the elements of each branch for the purpose of getting a clear conception of what is individual and peculiar in a special province of learning. Otherwise one will not gain from each its special contribution to the whole. That there is some danger from the kind of correlation that essays to teach all branches in each will be apparent from this point of view.

III. THE SCHOOL PROGRAMME.

In order to find a place in the elementary school for the several branches recommended in this report, it will be necessary to use economically the time allotted for the school term, which is about two hundred days, exclusive of vacations and holidays. Five days per week and five hours of actual school work or a little less per day, after excluding recesses for recreation, give about twenty-five hours per week. There should be, as far as possible, alternation of study-hours and recitations (the word recitation being used in the United States for class exercise or lesson conducted by the teacher and requiring the critical attention of the entire class). Those studies requiring the clearest thought should be taken up, as a usual thing, in the morning session, say arithmetic the second half hour of the morning and grammar the half-hour next succeeding the morning recess for recreation in the open air. By some who are anxious to

prevent study at home, or at least to control its amount it is thought advisable to place the arithmetic lesson after the grammar lesson, so that the study learned at home will be grammar instead of arithmetic. It is found by experience that if mathematical problems are taken home for solution two bad habits arise; namely, in one case, the pupil gets assistance from his parents or others, and thereby loses to some extent his own power of overcoming difficulties by brave and persistent attacks unaided by others; the other evil is a habit of consuming long hours in the preparation of a lesson that should be prepared in thirty minutes, if all the powers of mind are fresh and at command. An average child may spend three hours in the preparation of an arithmetic lesson. Indeed, in repeated efforts to solve one of the so-called "conundrums," a whole family may spend the entire evening. One of the unpleasant results of the next day is that the teacher who conducts the lesson never knows the exact capacity and rate of progress of his pupils; in the recitation he probes the knowledge and preparation of the pupil, plus an unknown amount of preparatory work borrowed from parents and others. He even increases the length of the lessons, and requires more work at home, when the amount already exceeds the unaided capacity of the pupil.

The lessons should be arranged so as to bring in such exercises as furnish relief from intellectual tension between others that make large demands on the thinking powers Such exercises as singing and calisthenics, writing and drawing, also reading, are of the nature of a relief from those recitations that tax the memory, critical alertness, and introspection, like arithmetic, grammar, and history.

Your Committee has not been able to agree on the question whether pupils who leave school early should have a course of study different from the course of those who are to continue on into secondary and higher work. It is contended, on the one hand, that those who leave early should have a more practical course, and that they should dispense with those studies that seem to be in the nature of preparatory work for secondary and higher education. Such studies as algebra and Latin, for example, should not be taken up unless the pupil expects to pursue the same for a sufficient time to complete the secondary course. It is replied, on the other hand, that it is best to have one course for all, because any school education is at best but an initiation for the pupil into the art of learning, and that wherever he leaves off in his school course he should continue, by the aid of the public library and home study, in the work of mastering science and literature. It is further contended that a brief course in higher studies, like Latin and algebra, instead of being useless, is of more value than any elementary studies that might replace them. The first ten lessons in algebra give the pupil the fundamental idea of the general expression of arithmetical solutions by means of letters and other symbols. Six months' study of it gives him the power to use the method in stating the manifold conditions of a problem in partnership, or in ascertaining a value that depends on several transformations of the data given. It is claimed, indeed, that the first few lessons in any branch are relatively of more educational value than an equal number of subsequent lessons, because the fundamental ideas and principles of the new study are placed at the beginning. In Latin, for instance, the pupil learns in his first week's study the, to him, strange phenomenon of a language that performs by inflections what his own language performs by the use of prepositions and auxiliaries. He is still more surprised to find that the order of words in a sentence is altogether different in Roman usage from that to which he is accustomed. He further begins to recognize in the Latin words many roots or stems which are employed to denote immediate sensuous objects, while they have been adopted into his English tongue to signify fine shades of distinction in thought or feeling. By these three things his powers of observation in matters of language are armed, as it were, with new faculties. Nothing that he has hitherto learned in grammar is so radical and far-reaching as what he learns in his first week's study of Latin. The Latin arrangement of words in a sentence indicates a different order of mental arrangement in the process of apprehension and expression of thought. This arrangement is rendered possible by declensions. This amounts to attaching prepositions to the ends of the words, which they thus convert into adjectival or adverbial modifiers; whereas the separate prepositions of the English must indicate by their position in the sentence their grammatical relation. These observations, and the new insight into the etymology of English words having a Latin derivation, are of the nature of mental seeds which will grow and bear fruit throughout life in the better command of one's native tongue. All this will come from a very brief time devoted to Latin in school.

Amount of time for each branch.

Your Committee recommends that an hour of sixty minutes each week be assigned in the programme for each of the following subjects throughout the eight years: physical culture, vocal music, oral lessons in natural science (hygiene to be included among the topics under this head), oral lessons in biography and general history, and that the same amount of time each week shall be devoted to drawing from the second year to the eighth inclusive; to manual train ng during the seventh and eighth years so as to include sewing and cookery for the girls, and work in wood and iron for the boys.

Your Committee recommends that reading be given at least one lesson each day for the entire eight years, it being understood, however, that there shall be two or more lessons each day in reading in the first and second years, in which the recitation is necessarily very short, because of the inability of the pupil to give continued close attention, and because he has little power of applying himself to the work of preparing lessons by himself. In the first three years the reading should be limited to pieces in the colloquial style, but selections from the classics of the language in prose and in poetry shall be read to the pupil from time to time, and discussions made of such features of the selections read as may interest the pupils. After the third year your Committee believes that the reading lesson should be given to selections from classic authors of English, and that the work of the recitation should be divided between (*a*) the elocution, (*b*) the grammatical peculiarities of the language, including spelling, definitions, syntactical construction, punctuation, and figures of prosody, and (*c*) the literary contents, including the main and accessory ideas, the emotions painted, the deeds described, the devices of style to produce a strong impression on the reader. Your Committee wishes to lay emphasis on the importance of the last item, — that of literary study, — which should consume more and more of the time of the recitation from grade to grade in the period from the fourth to the eighth year. In the fourth year and previously the first item — that of elocution, to secure distinct enunciation and correct pronunciation — should be most prominent. In the fifth and sixth years the second item — that of spelling, defining, and punctuation — should predominate slightly over the other two items. In the years from the fifth to the eighth there should be some reading of entire stories, such as Gulliver's Travels, Robinson Crusoe, Rip Van Winkle, The Lady of the Lake, Hiawatha, and similar stories adapted in style and subject-matter to the capacity of the pupils. An hour should be devoted each week to conversa tions on the salient points of the story, its literary and ethical bearings.

Your Committee agrees in the opinion that in teaching language care should be taken that the pupil practices much in writing exercises and original compositions. At first the pupil will use only his colloquial vocabulary, but as he gains command of the technical vocabularies of geography, arithmetic, and history, and learns the higher literary vocabulary of his language, he will extend his use of words accordingly. Daily from the first year the child will prepare some lesson or portion of a lesson in writing. Your Committee has included under the head of oral grammar (from the first to the middle of the fifth year) one phase of this written work devoted to the study of the literary form and the technicalities of composition in such exercises as letter writing, written reviews of the several branches studied, reports of the oral lessons in natural science and history, paraphrases of the poems and prose literature of the readers, and finally compositions or written essays on suitable themes assigned by the teacher, but selected from the fields of knowledge studied in school. Care should be taken to criticise all paraphrases of poetry in respect to the good or bad taste shown in the choice of words; parodies should never be permitted.

It is thought by your Committee that the old style of composition writing was too formal. It was kept too far away from the other work of the pupil. Instead of giving a written account of what he had learned in arithmetic, geography, grammar, history, and natural science, the pupil attempted artificial descriptions and reflections on such subjects as "Spring," "Happiness," "Perseverance," "Friendship," or something else outside of the line of his school studies.

Your Committee has already expressed its opinion that a good English style is not to be acquired by the study of grammar so much as by familiarity with great masterpieces of literature. We especially recommend that pupils who have taken up the fourth and fifth readers, containing the selections from great authors, should often be required to make written paraphrases of prose or poetic models of style, using their own vocabulary to express the thoughts so far as possible, and borrowing the *recherché* words and phrases of the author, where their own resources fail them. In this way the pupil learns to see what the great author has done to enrich the language and to furnish adequate means of expression for what could not be presented in words before, or at least not in so happy a manner.

Your Committee believes that every recitation is, in one aspect of it, an attempt to express the thoughts and information of the lesson in the pupil's own words, and thus an initial exercise in composition. The regular weekly written review of the important topics in the several branches studied is a more elaborate exercise in composition, the pupil endeavoring to collect what he knows and to state it systematically and in proper language. The punctuation, spelling, syntax, penmanship, choice of words, and style should not, it is true, be made a matter of criticism in connection with the other lessons, but only in the language lesson proper. But the pupil will learn language, all the same, by the written and oral recitations. The oral grammar lessons, from the first year to the middle of the fifth year, should deal chiefly with the use of language, gradually introducing the grammatical technique as it is needed to describe accurately the correct forms and the usages violated.

Your Committee believes that there is some danger of wasting the time of the pupil in these oral and written language lessons in the first four years by confining the work of the pupil to the expression of ordinary commonplace ideas not related to the subjects of his other lessons, especially when the expression is confined to the colloquial vocabulary. Such training has been severely and justly condemned as teaching what is called prating or gabbling, rather than a noble use of English speech. It is clear that the pupil should have a dignified and worthy subject of composition, and what is so good for his purpose as the themes he has tried to master in his regular lessons? The reading lessons will give matter for literary style, the geography for scientific style, and the arithmetic for a business style; for all styles should be learned.

Your Committee recommends that selected lists of words difficult to spell be made from the reading lessons and mastered by frequent writing and oral spelling during the fourth, fifth, and sixth years.

Your Committee recommends that the use of a text-book in grammar begin with the second half of the fifth year, and continue until the beginning of the study of Latin in the eighth grade, and that one daily lesson of twenty-five or thirty minutes be devoted to it.

For Latin we recommend one daily lesson of thirty minutes for the eighth year. For arithmetic we recommend number work from the first year to the eighth, one lesson each day, but the use of the text-book in number should not, in our opinion, begin until the first quarter of the third year. We recommend that the

applications of elementary algebra to arithmetic, as hereinbefore explained, be substituted for pure arithmetic in the seventh and eighth years, a daily lesson being given.

Your Committee recommends that penmanship as a separate branch be taught in the first six years at least three lessons per week.

Geography, in the opinion of your Committee, should begin with oral lessons in the second year, and with a text-book in the third quarter of the third year, and be continued to the close of the sixth year with one lesson each day, and in the seventh and eighth years with three lessons per week.

History of the United States with the use of a text-book, your Committee recommends for the seventh and the first half of the eighth year, one lesson each day; the Constitution of the United States for the third quarter of the eighth year.

The following schedule will show the number of lessons per week for each quarter of each year: —

Reading. Eight years, with daily lessons.

Penmanship. Six years, ten lessons per week for first two years, five for third and fourth, and three for fifth and sixth.

Spelling Lists. Fourth, fifth, and sixth years, four lessons per week.

Grammar. Oral, with composition or dictation, first year to middle of fifth year, text-book from middle of fifth year to close of seventh year, five lessons per week. (Composition writing should be included under this head. But the written examinations on the several branches should be counted under the head of composition work.)

Latin or French or German. Eighth year, five lessons per week.

Arithmetic. Oral first and second year, text-book third to sixth year, five lessons per week.

Algebra. Seventh and eighth years, five lessons per week.

Geography. Oral lessons second year to middle of third year, text-book from middle of third year, five lessons weekly to seventh year, and three lessons to close of eighth.

Natural Science and Hygiene. Sixty minutes per week, eight years.

History of United States. Five hours per week seventh year and first half of eighth year.

Constitution of United States. Third quarter in the eighth year.

General History and Biography. Oral lessons, sixty minutes a week, eight years.

Physical culture. Sixty minutes a week, eight years.

Vocal Music. Sixty minutes a week, eight years.

Drawing. Sixty minutes a week, eight years.

Manual Training, Sewing, and Cooking. One-half day each week in seventh and eighth years.

Your Committee recommends recitations of fifteen minutes in length in the first and second years, of twenty minutes in length in the third and fourth years, of twenty-five minutes in the fifth and sixth years, and of thirty minutes in the seventh and eighth.

The results of this programme show for the first and second years twenty lessons a week of fifteen minutes each, besides seven other exercises occupying an average of twelve minutes apiece each day; the total amount of time occupied in the continuous attention of the recitation or class exercises being twelve hours, or an average of two hours and twenty-four minutes per day.

For the third year twenty lessons a week of twenty minutes each, and five general exercises taking up five hours a week, or an average of one hour per day, giving an average time per day of two hours and twenty minutes for class recitations or exercises.

In the fourth the recitations increase to twenty-four (by reason of four extra lessons in spelling) and the time occupied in recitations and exercises to thirteen hours and an average per day of two hours thirty-six minutes.

In the fifth and sixth years the number of recitations increases to twenty-seven per week, owing to the addition of formal grammar, and the total number of hours required for all is 16¼ per week, or an average of 3¼ per day.

In the seventh and eighth years the number of lessons decreases to twenty-three, history being added, penmanship and special lessons in spelling discontinued, the time devoted to geography reduced to three lessons a week. But the recitation is increased to thirty minutes in length. Manual training occupies a half-day, or 2½ hours, each week. The total is 19 hours per week, or 3¾ per day.

Branches.	1st year	2d year	3d year	4th year	5th year	6th year	7th year	8th year
Reading	10 lessons a week			5 lessons a week				
Writing	10 lessons a week		5 lessons a week		3 lessons a week			
Spelling lists				4 lessons a week				
English Grammar	Oral, with composition lessons				5 lessons a week with text-book			
Latin								5 lessons
Arithmetic	Oral, 60 minutes a week	5 lessons a week with text-book						
Algebra							5 lessons a week	
Geography	Oral, 60 minutes a week		*5 lessons a week with text-book				3 lessons a week	
Natural Science + Hygiene	Sixty minutes a week							
U. S. History							5 lessons a week	
U. S. Constitution								*5 ls
General History	Oral, sixty minutes a week							
Physical Culture	Sixty minutes a week							
Vocal Music	Sixty minutes a week divided into 4 lessons							
Drawing	Sixty minutes a week							
Man'l Train. or Sewing + Cookery							One half day each week	
Number of Lessons	20+7 daily exer.	20+7 daily exer.	20+5 daily exer	24+5 daily exer.	27+5 daily exer.	27+5 daily exer.	23+6 daily exer.	23+6 daily exer.
Total Hours of Recitat'ns	12	12	11⅔	13	16¼	16¼	17½	17½
Length of Recitations	15 min	15 min	20 min	20 min	25 min	25 min	30 min	30 min

* Begins in second half year.

The foregoing tabular exhibit shows all of these particulars.

IV. METHODS AND ORGANIZATION.

Your Committee is agreed that the time devoted to the elementary school work should not be reduced from eight years, but they have recommended, as hereinbefore stated, that in the seventh and eighth years a modified form of algebra be introduced in place of advanced arithmetic, and that in the eighth year English grammar yield place to Latin. This makes, in their opinion, a proper transition to the studies of the secondary school and is calculated to assist the pupil materially in his preparation for that work. Hitherto, the change from the work of the elementary school has been too abrupt, the pupil beginning three formal studies at once, namely, algebra, physical geography, and Latin.

Your Committee has found it necessary to discuss the question of methods of teaching in numerous instances, while considering the question of educational values and programmes, because the value and time of beginning of the several branches depend so largely on the method of teaching.

The following recommendations, however, remain for this part of their report: —

They would recommend that the specialization of teachers' work should not be attempted before the seventh or eighth year of the elementary school and in not more than one or two studies then. In the secondary school it is expected that a teacher will teach one, or at most, two branches. In the elementary school, for at least six years, it is better, on the whole, to have each teacher instruct his pupils in all the branches that they study, for the reason that only in this way can he hold an even pressure on the requirements of work, correlating it in such a manner that no one study absorbs undue attention. In this way the pupils prepare all their lessons under the direct supervision of the same teacher, and by their recitations show what defects of methods of study there have been in the preparation.

The ethical training is much more successful under this plan, because the personal influence of a teacher is much greater when he or she knows minutely the entire scope of the school work. In the case of the special teacher the responsibility is divided and the opportunities of special acquaintance with character and habits diminished.

With one teacher, who supervises the study and hears all the recitations, that there is a much better opportunity to cultivate the two kinds of attention. The teacher divides his pupils into two classes and hears one recite while the other class prepares for the next lesson. The pupils reciting are required to pay strict attention to the one of their number who is explaining the point assigned him by the teacher — they are to be on the alert to notice any mistakes of statement or omissions of important data, they are at the same time to pay close attention to the remarks of the teacher. This is one kind of attention, which may be called associated critical attention. The pupils engaged in the preparation of the next lesson are busy, each one by himself, studying the book and mastering its facts and ideas, and comparing them one with another, and making the effort to become oblivious of their fellow-pupils, the recitation going on, and the teacher. This is another kind of attention, which is not associated, but an individual effort to master for one's self without aid a prescribed task and to resist all distracting influences. These two disciplines in attention are the best formal training that the school affords.

Your Committee has already mentioned a species of faulty correlation wherein the attempt is made to study all branches in each, misapplying Jacotot's maxim, "all is in all" (*tout est dans tout*).

A frequent error of this kind is the practice of making every recitation a language lesson, and interrupting the arithmetic, geography, history, literature, or whatever it may be, by calling the pupil's attention abruptly to something in his forms of expression, his pronunciation, or to some faulty use of English; thus turning the entire system of school work into a series of grammar exercises and weakening the power of continuous thought on the objective contents of the several branches, by creating a pernicious habit of self-consciousness in the matter of verbal expression. While your Committee would not venture to say that there should not be some degree of attention to the verbal expression in all lessons, it is of the opinion that it should be limited to criticism of the recitation for its want of technical accuracy. The technical words in each branch should be discussed until the pupil is familiar with their full force. The faulty English should be criticised as showing confusion of thought or memory, and should be corrected in this sense. But solecisms of speech should be silently noted by the teacher for discussion in the regular language lesson.

The question of promotion of pupils has occupied from time to time very much attention. Your Committee believes that in many systems of elementary schools there is injury done by too much formality in ascertaining whether the pupils of a given class have completed the work up to a given arbitrarily fixed point, and are ready to take up the next apportionment of the work. In the early days of city school systems, when the office of superintendent was first created, it was thought necessary to divide up the graded course of study into years of work, and to hold stated annual examinations to ascertain how many pupils could be promoted to the next grade or year's work. All that failed at this examination were set back at the beginning of the year's work to spend another year in reviewing it. This was to meet the convenience of the superintendent, who, it was said, could not hold examinations to suit the wants of individuals or particular classes. From this arrangement there naturally resulted a great deal of what is called "marking time." Pupils who had nearly completed the work of the year were placed with pupils who had been till now a year's interval below them. Discouragement and demoralization at the thought of taking up again a course of lessons learned once before caused many pupils to leave school prematurely.

This evil has been remedied in nearly one-half of the cities by promoting pupils whenever they have

completed the work of a grade. The constant tendency of classification to become imperfect by reason of the difference in rates of advancement of the several pupils owing to disparity in ages, degree of maturity, temperament, and health, makes frequent reclassification necessary. This is easily accomplished by promoting the few pupils who distance the majority of their classmates into the next class above, separated as it is or ought to be, by an interval of less than half a year. The bright pupils thus promoted have to struggle to make up the ground covered in the interval between the two classes, but they are nearly always able to accomplish this, and generally will in two years' time need another promotion from class to class.

The procrustean character of the old city systems has been removed by this device.

There remain for mention some other evils besides bad systems of promotion due to defects of organization. The school buildings are often with superstitious care kept apart exclusively for particular grades of pupils. The central building erected for high school purposes, though only half filled, is not made to relieve the neighboring grammar school, crowded to such a degree that it cannot receive the classes which ought to be promoted from the primary schools. It has happened in such cases that this superstition prevailed so far that the pupils in the primary school building were kept at work on studies already finished, because they could not be transferred to the grammar school.

In all good school systems the pupils take up new work when they have completed the old, and the bright pupils are transferred to higher classes when they have so far distanced their fellows that the amount of work fixed for the average ability of the class does not give them enough to do.

In conclusion, your Committee would state, by way of explanation, that it has been led into many digressions, in illustrating the details of its recommendations in this report, through its desire to make clear the grounds on which it has based its conclusions and through the hope that such details will call out a still more thorough-going discussion of the educational values of branches proposed for elementary schools, and of the methods by which those branches may be successfully taught.

With a view to increase the interest in this subject, your Committee recommends the publication of selected passages from the papers sent in by invited auxiliary committees and by volunteers, many of these containing valuable suggestions not mentioned in this report.

DISCUSSION ON REPORT OF DR. HARRIS.

FRANK M. MCMURRY, *Franklin School, Buffalo:* My remarks have no reference to the dissenting opinions, but will be confined to the correlation in the main body of the report. So far, we have listened to the definition of correlation; my remarks refer to that, and to its influence on the course of study.

The address by Miss Arnold last night referred to correlation. That lecture is not in accord with the report of five in regard to this subject. We have been using two synonyms for correlation — coördination and concentration. Many persons have gotten their definition through their ideas of concentration. People have in mind, as I understand it, mainly the relation of studies to one another. Let me give one or two samples in addition to last night's suggestions. Let me refer to Egypt. The geography will naturally take the Nile, the drawing will take up cardboard work, etc., the pupil will deal with the pyramid and the triangle in mathematics, and with language work in the whole subject. I give that as a simple illustration of concentration.

I turn to the part of the report where they take up correlation by synthesis of studies; that, as I understand it, was the thought in the mind of Miss Arnold, and it is what is in my own mind. They take up the subject of Robinson Crusoe. I think they should look into it further, but it is not my purpose to defend Robinson Crusoe. They have taken the story of Robinson Crusoe as a type and they have condemned that as a type. We may think they aim mainly at the story of Robinson Crusoe alone, but they say, "Your committee would call attention in this connection to the importance of the pedagogical principle of analysis and isolation as preceding synthesis and correlation. There should be rigid isolation of the elements of each branch for the purpose of getting a clear perception of what is individual and peculiar in a special province of learning."

They warn us against having studies closely tied together. They do not realize, as it seems to me, that the chief fault of our present studies is that they do not support each other. The report is opposed from principle to this kind of correlation. They refer later o this matter in these words: "Your committee has already mentioned a species of faulty correlation wherein the attempt is made to study all the branches in each, misapplying Jacotot's maxim, 'all is in all.'" Further than that, they show a large lack of sympathy with this point. They have no allusion to the fact that the different sciences have a relationship with one another. By their omissions, as well as their positive statements, they show their opposing attitude toward correlation.

They talk about having a proper sequence in the studies,— they do not insist upon it from principle. They say, "The most practical knowledge of all, it will be admitted, is a knowledge of human nature,— a knowledge that enables one to combine with his fellow-men and to share with them the physical and spiritual wealth of the race. Of this high character as humanizing or civilizing are the favorite works of literature found in the school readers, about one hundred and fifty English and American writers being drawn upon for the material." In other words, they are in sympathy with the text-book readers. In enforcing that point further, "In the first three years the reading should be limited to pieces in the colloquial style, but selections from the classics of the language in prose and poetry shall be read to the pupil from time to time." "In the years from the fifth to the eighth there should be some reading of entire stories, such as Gulliver's Travels, Robinson Crusoe," and so forth.

As I understand it, we should have wholes in literature from the beginning. There are sixty pages in this report, only two of them refer to the subject of concentration, and they condemn that subject from principle. They show that they do not, from principle, favor the idea of connected thought. That is my first point — opposition to the whole matter. [Applause.]

The next point is, What do they discuss? [Laughter.] They have four points in their definition of correlation. The fourth point is the chief subject. "Your committee understands by correlation of studies the selection and arrangement in order of sequence of such objects of study as shall give the child an insight into the world that he lives in, and a command over his resources such as is obtained by healthful coöperation with one's fellows. In a word, the chief consideration to which all others are to be subordinated, in the opinion of your committee, is this requirement of the civilization into which the child is born as determining what he shall study in school." There is the old idea of study, in which, from the adult standpoint, we decide that what the child will use as a man shall constitute his course. We have had the three R's and we have tended to kill the children. The new education is based on child study, apperception, and interest. We have reached the conclusion that knowledge is not primarily for the sake of knowledge, but for use, and the only condition under which the ideas will be active is that they shall appeal to the child and shall fit his nature. Child study, interest, and apperception demand that the chief factor shall be the nature of the child — that is not the attitude of this committee of five. "Your committee is of the opinion that psychology of both kinds, physiological and introspective, can hold only a subordinate place in the settlement of questions relating to the correlation of studies. The branches to be studied and the extent to which they are studied will be determined mainly by the demands of one's civilization." Psychology, in a plain statement, "will largely determine the methods of instruction, the order of taking up the several topics so as to adapt the school work to the growth of the pupil's capacity." In other words, the committee have failed to be influenced as to a course of study by other considerations than the demands of civilization. They state plainly that psychology shall be a subordinate matter in determining curriculum. The fact is to be seen in their course of study. Reading, nature study, and history are the principal subjects, but in the minds of the committee the principal subjects are reading, writing, etc., for the first three years. I do not believe it. In the first three years, reading pieces; in other words, the first three years do not deal primarily in rich ideas. One objection to Robinson Crusoe — "It omits cities, governments, the world commerce, the international process, the Church, the newspaper, and book from view." They are not in sympathy with the child. I would choose Robinson Crusoe because it does not deal with subjects which are outside the child's interest.

F. W. PARKER, *Cook County Normal, Chicago:* When I moved, two years ago, the appointment of this committee, I had in mind the careful study of the whole matter of correlation that teachers in this country should get from the highest sources the doctrine and the highest criticism,— that a report should be presented which should follow the greatest report upon education in this century,— the report of the Committee of Ten. I have not had time to study this report and can, therefore, say very little upon it. These subjects should be studied with the greatest care. It seems to me that there are some general criticisms which may be made in the brief time at my command.

We cannot doubt that these gentlemen have made the most careful study of the doctrine of Herbart and of his disciples,— Ziller, Stoy, and Rein; they have also had their eye upon the distinguished students of this doctrine in this country. The failure of this report is that they haven't even given us the fundamental doctrine of Herbart. There is no doubt that the Herbartian doctrine and all other doctrines of concentration are ignored in their fundamental essentials. That is what this committee has left out — it is the old story, the play of Hamlet with Hamlet left out, or to put it a little more mildly, Hamlet kicked out. It seems that this doctrine is the only doctrine which furnishes a grand working hypothesis to the teachers of the world. It should be examined most carefully, and what cannot bear the closest criticism should be rejected. The five, with the dissent of the Western men, have not deemed it worthy of this attention and have rejected it *in toto*.

Poor old Robinson Crusoe bears the brunt, notwithstanding our esteemed friends of the Normal University, who wish to interest the children in something. Sometimes we go into schools where there is not much interest, especially in spelling and grammar. I leave the defense of Robinson Crusoe to Mr. McMurry.

The other reference is to language. "It is not wise to stop a child to correct his mistakes in grammar"! "The development of language cannot be organically related to the development of thought"! It is one of the fundamental principles, if I understand it, that the development of thought should have as a necessity the evolution of language. This, says the report, cannot be done; grammar must be developed by itself and language by itself. If I am incorrect, I beg to be excused. I can only refer to a few features of this report in the tabulated programme. A course of study is absolutely necessary, but it should be marked "for this day only." We take the subject of reading twice every day for the first two years, once a day for the next six years. Reading is thinking, it should be educated thinking. We cannot do thinking without the subjects to be learned — as geography and science. Science, according to the programme, is to be taught by oral lessons. The world is round, but children cannot reason. Would it not be well to go into the laboratory to see whether the children cannot reason? The child, by force of his nature, must reason — must find out these things. I am quoting from John Dewey. But we are told in this report that the subject of science, at least a few things in these subjects, must be told him first. I never knew a case of the kind, but it may be.

Now, I would say to this committee of five, have your reading the best literature,— there should be nothing but literature. Should we not have literature from the beginning? is the question we are asking. It seems to be the case that this report leaves very little to ask. The child spends all his time in reading — reading what? Can the child learn to get thought in reading? Some of us think he can. Is it not well to follow here the scientific method and find out whether the child can learn to read beautifully and well? The same of writing. I see the millions bowed down for years to the copy books. Is there no way out? Is there no relief? Is it possible for the child to learn to write as he learns to talk, or must he be bound to the desk? [Time]

I would simply say that this report should be entitled to the greatest respect. I shall go home and study it carefully and prayerfully. I move that a committee of fifteen be appointed to revise this report. [Great applause.]

PRESIDENT CHARLES DE GARMO, *Swarthmore College, Pennsylvania.* Fellow-teachers: Those who are to discuss this question this morning are placed under a great embarrassment. The report should have been printed for general distribution. [Applause]

We might infer from what we have heard that the report is valueless. This is by no means the case. It is an estimate of educational values. Under the subject of language, I quote, "A survey of its educational value, subjective and objective, usually produces the conviction that it is to retain the first place." Under arithmetic, "Side by side with language study is the study of mathematics in the school, claiming the second place in importance." Under geography, "The educational value of geography, as it is and has been in elementary schools, is obviously very great. The educational value of geography is even more apparent if we admit the claims of those who argue that the present epoch is the beginning of an era." As a critique of educational values the report is a very important one. I would like to call your attention to the correlation of the pupil to his environment. That, I think, is an important matter. They have departed, at least in principle, from that old formal discipline alone; it is to fit this individual for life, he must master his environment. The committee have examined the various studies as to their value, and that, I think, is a grand thing. I cannot see at all that it is a correlation of studies. It has been said in your hearing that the throwing of light by studies on each other was disregarded. The report presents a very different idea of the correlation of studies. The second address of last evening — by Miss Arnold — has been referred to as an illustration of bringing the studies together so that one throws light upon another. I think the idea that there is no need of reform will be reinforced by this report; that the report will have a reactionary effect upon those who think that way. The committee have denied that we need any reform and have indicated that we have the reform already. It seems that the name given to this report should be taken off and the heading "An essay on educational values" substituted instead. It is true that this committee have, at the beginning, laid down a principle of correlation which would make a correlation. The text is here, but the discussion is lacking. So far as I have read, I have not found one word in the report which shows what the sequence of studies should be. There is a little hint in arithmetic where it says, "Common fractions should come before decimals." Is not this a correlation of study under that old principle which Rosenkranz describes — a series of tunnels through the educational fields with switch connections, so that if we start in at one end we are switched to this or that without any view of the whole journey? We may light these tunnels with electricity, perhaps, but, after all, we are spending eight years underground, switching from one tunnel to another. Now the other alternative is to go out into the world go out into the sunshine, and follow tracks so clear that a child can examine all that is about them. It is possible to relate one subject to the other so that when it is dark the child, even if he has not the sun to lighten his eyes, can at least have some stars of hope above him.

PRESIDENT OF THE DEPARTMENT: From the course the discussion has taken, it has seemed to me that Dr. Harris should say a word at this point and read some additional parts of the report.

W. T. HARRIS, *Commissioner of Education:* I must set myself right on Herbert. The report does not allude to Herbart anywhere except under language. This about Robinson Crusoe was not referred to the Herbartians because it was thought that they do not in this matter do themselves justice. To make Herbart of use in pedagogy, we must ignore his philosophy. Now, what are we going to do with a philosopher who omits the will and then attempts to explain it? Herbart argues that desire can be aroused and pointed so as to produce activity. One idea hinges on another. Now, here comes a great difference, and I can show how Herbart is useful; that is, in the matter of apperception. When a child has digested — It is not Herbart's, but he is the man who has harped on it all his life. I bow to Herbart and say, come in. We honor Herbartians. I am amazed to think that in appointing this committee there was any such notion as Colonel Parker's. Correlation has no business to mean what they make it to mean. There are hardly five books in the English language that give it that meaning. We have correlation of forces and kindred uses of the word, but why should they spring this use upon me. [Applause.] Some of the members of the committee had that idea, but I did not think they were right. When I was about two thirds done I made mention of it. That meaning is not in the dictionary. I defy any one to find it.

The pedagogy of Herbart lays supreme emphasis upon interest. The category of the will is duty. Now, suppose we should go the whole length with the Herbartians, as suggested by my friends on the stage, we shall find ourselves dealing most with tickling the fancy. These gentlemen came here to discuss something not yet read. The report goes on, as Mr. DeGarmo says, and discusses educational value. We have all sorts of things done because there has not been a careful study of educational values. Now, of course, these theories may all be overthrown, but if they are it will be by something better Without educational values, what are you going to do with all your studies? You will toss them away with as much recklessness as my friend Parker uses in tossing away English grammar and in regarding it as inferior for purposes of study to the butterfly that comes flitting by the window.

These pieces that have gotten into the readers have really more unity in some cases than there is in the work to which they belong. The battle of Waterloo which comes in "Childe Harold" is an illustration. The Charge of the Light Brigade is another. The Ode on the Duke of Wellington, because it brings in the Hebrew form of poetry and marries it to the Anglo-Saxon, is a wonderful work of art.

CHARLES MCMURRY, *State Normal University, Normal, Ill.:* In one of your statements read: "Your committee would call attention in this connection to the importance of the pedagogical principle of analysis and isolation as preceding synthesis and correlation." Now, as I understand it, this is what this committee has attempted to report. Now, he says that this precedes synthesis or correlation. I would like to know if there is any dictionary or number of dictionaries to make correlation mean what this says — the analysis and isolation of subjects of study.

I have been very much afraid that Dr. Harris would take refuge in the discussion of the subject of the will in which he distinguishes Herbart from others. The exclusion of the will is held as far as Herbart is concerned of moral education. Now I wish to say that Herbart has laid down more and better educational principles than any other philosopher.

The more difficult thing is not exactly the best thing for the child in the first and second grades. There was an old theory among the Latins that if the child could be made to go through the difficulties of a Latin speech, it would prepare him for the difficult things to follow. Now, we wish to have life and not dead formalism. I believe that a thoughtful study of this report will convince any one who is interested in children that it is formal, and is a production of this old idea, based upon language as the foundation of all education.

PRESIDENT W. H. HERVEY, *Teachers' College, New York:* I find myself drawn in two directions on this question. I fain would cleave to everything that has been said this morning as containing the truth. I believe that, so far as this report and these remarks confine themselves to educational principles, any one of us may agree most heartily. Only where they descend to particular applications are we at variance. We always are at variance when we descend from the clouds, but that is no objection to the clouds. Now, I take it there are arrayed before us the two opposing camps,— the Hegelian and the Herbartian. What does the Hegelian say? In order that you may know the world you must turn your back upon yourself and lose yourself; you lose your life that you may save it. You leave your home plate, go to the second base, then to the third base, and you make a home run. That is a true type of all development. What, on the other hand, is the standpoint of the Herbartian? What we know depends upon what we have known. And that is true. And what we can do, according to this philosophy, depends upon the interest, the kinetic energy. About this matter of will, we have the Calvinistic theology set over against the Unitarian. Hegel's Lord was a man of war. Herbart brings us to view the New Jerusalem. He shows us the church, not militant, but triumphant. Herbart distinguishes the good from the evil, and makes it impossible for a man to do a wrong deed or to think a wrong thought, and that, I take it, is even a higher attainment than the Hegelian philosophy has thought of. Any one who develops the will by the man-of-war idea will have a sorry will upon his hands. There is, with the young child, certainly, a synthesis, a correlation, a development of taste where the analysis is suppressed and unconscious; and yet, my friends, if you attempt to educate a boy in the upper grammar grades or the high school according to the same principles as the primary grades, you make a sorry mess of it. If we would pass from the state of the child to the state of the man, it is necessary for us to go through the dry bones of analysis.

DR B. A. HINSDALE, *University of Michigan, Ann Arbor:* There are two things which I wish very briefly to touch. First, I do not understand Dr. Harris, in speaking of Herbart and the will, to leave the subject in the form in which Dr. McMurry understood that matter. I understand that Herbart does not base morals upon the will, but rather upon the feeling and the desires. Now, whether the will or the desires furnish a proper basis is a question I do not wish to discuss. Certainly, when any one says that the Doctor declared that Herbart does not take the question of morals into account he makes a mistake. I understand him to say that Herbart does not place morals upon the proper foundation. In regard to courses of study, there is no such thing as considering this question apart from criteria. Now, what are our criteria to be? That I do not propose to discuss, but where are we to seek for our criteria? For myself, I have been in the habit of discussing that subject in this way. These are to be found, in the first place, in the constitution of the human soul, and second, in the facts that constitute the envisonment of men. I do not say which is below the other. I do say that a serious mistake will be made by that pedagogist who leaves out either of these or gives either a very inferior position. As to how either presupposes the other, that is a very important question, but I cannot discuss it at more length.

Now as to the process of isolation — the first process of knowledge is to isolate things. We have certainly been taught that the first process of the mind is not a synthetic, but an analytic process. Every person coming into this hall took a view of it as a whole, and then began to isolate this thing from that, and then this process, after a time, ceased. But that there is to be no synthesis is a proposition which I do not understand to be in this report.

When a child comes to school you may divide the subjects which occupy his attention into two groups. The first are the elementary school arts,— as the improving of speech, the studies of reading, writing, drawing, and numerical calculations, if he has never entered upon these. They are not studies, they are the arts of the elementary school. We teach them, not for their own sake, but that they may be used as instruments. [Time called by the chairman, and extended by vote of the house.]

I wish, in the first instance, to express my sense of gratification. I felt that I was leaving the matter in a very imperfect form.

Now, I had said all that I care to say about the arts in the elementary schools. There are the studies, I mean the real studies, those we study for the purpose of getting out of them all that there is in them. Now, there is a discussion as to the relation in which the two classes of studies shall stand at the beginning. Now, the old idea was, that some of the first time in school should be devoted to these arts, and the studies were permitted to fall into the background, or perhaps fall clear out. Now, if I understand some of the pedagogists, their idea is to put the beginner at the real thing, or perhaps I should say to keep him at the real thing, that the arts should be acquired during the studies. Now, the question occurs to me, whether, in the elementary schools, these arts can ever be successfully taught when we are pretending to teach something else? I must say that if the object were to have a pupil advance the greatest distance for the first three months or six months, you had better say nothing about the arts at all. But we put him at the arts, knowing that when we put these gifts into his hands we are giving him an instrument of power that he will be able to use throughout his whole life. [Applause.]

Now, the question of concentration, so-called, is involved in this matter. I want to ask the question, and I would discuss it if I had a quarter of an hour,— I want to ask the question, how far it if possible to do two things in an intense manner at the same time. When I was superintendent of schools, a gentleman picked off the table a so-called physiological reader, and, looking at the title page, said, "For one, I could never teach physiology as a subject and reading as an art at the same time. The physiology is not and it cannot be made a proper material for a school reading book; a proper school reading book cannot be made a good physiology." Yet I believe in concentration, if it means letting one subject assist and enforce another. I hope none of the brethren will become so enthusiastic as to assume that the whole round of information can be brought under the teaching of one subject. [Applause.]

DR. E E. WHITE, *Columbus, O:* I have a little hesitation in speaking on this question, where I am only a learner. I am anxious to know what my young friends mean. I hope I shall get the correlation of their ideas in time. [Laughter.]

As it seems to me, correlation, as a distinctive method, assumes to do more than it is possible for a method to accomplish. In my judgment, there is no one method of education, whether it be Herbartian or otherwise. To assume that a human soul is to be exclusively educated by the Herbartian method is a great assumption. I do not believe that we are to supplement and supplant now all that has been known in the education of the young based on the psychology which the defenders of this method are willing to discard. There are many of its methods we are willing to accept, but the Herbartian pedagogy is based on the Herbartian psychology, and if you discard that, you have no system of pedagogy but you have many elements which you can utilize. Now we make a mistake when we assume that there is only one method by which the young man in college and the children can be educated. The lady who spoke last night, Miss Arnold, had not such an idea. Now there is a blending in the primary grades which is not possible in the upper grades. That is emphasized completely in what we call the special courses in colleges. That blending may be on mere surface relations which will be discarded as soon as we pass above the primary grades. While we may concede that this is possible in one exercise, it is not possible in higher instruction. Our methods change, so let us not be too sweeping, too confident in our terms. Further, I think that Dr. Harris is entirely right in the position he has taken as to the meaning of coördination or correlation. Now, I want to say just one word further. Nearly all these views as presented end at last in this, that no class instruction is possible, that every individual is to be taught by himself. These ideas lead to but one conclusion, that all class instruction is to be given up. Basing all we do upon this child, we must treat each child alone. I can see that concentration is possible in that way. Now, what I want to say is, that there have been many fair scholars since the flood. [Laughter.] How were they produced? How were the scholars who are now before us produced? Are we shut up to a choice between pedagogic hash on the one hand, and baked beans on the other? Is there any one before me who was educated by concentration? There is no universal way in which the human soul is to be brought to power.

DR. NICHOLAS MURRAY BUTLER, *Columbia College, New York:* This is an interesting and exciting field of battle; it has not been a Bull Run, and it is manifestly not an Appomattox. But let us be fair, and let us discuss the question that is presented by this report. I shall spend no time in eulogizing this report. I do say that such a report, presented at this time, dealing with this specific topic in these words, is little less than a misrepresentation. Its interpretation of its subject is incorrect and improper as a point of fact; a reference to the Century dictionary shows that this is not the educational meaning of correlation, but that it has the sense given by Dr. McMurry and others. What some of us wish to have discussed in correlation is whether or not there may be an interdependence of studies in elementary schools. I find no fault with the other use as put forth by the committee. They have given us a splendid discussion, and analysis of historic value, and a defence of *status quo*. We have been endeavoring for a hundred years to extract a curriculum from this sort of thing, but we are not satisfied. For the great advance we have made in this matter, we are indebted more largely to Dr. Harris than to any other man, living or dead. Now, we ask, the raw material having been dug out, what about the detail?

What, ladies and gentlemen, are we to understand by child study, if we are to sit down and make a course of study from our adult point of view? It is the putting of the child as a corner-stone which constitutes the new pedagogy. Every child is to be treated as an individual. We want to take him out from the thraldom. There is no universal method. Correlation is natural to the child, and the analysis we have made is an adult product foreign to his nature. We have learned that the new-born child regards his entire environment as a single thing. It takes time for him to separate himself from it and recognize the fact that his finger tip belongs to him and not to that. The reason that we have this difficulty with the child is that we are putting upon him a suit that we think that he ought to wear, whether it fits him or not. Just so long as the child regards everything outside of him as a unit, we must regard it so in school. As he gets older, he finds the subjects of study in parallel lines; we cannot force them down as parallel diverging lines in the elementary school.

I had hoped great things from this report, and I am sincerely disappointed that the gentlemen have not discussed this specific question. I belong to no school and wear no badge. Is there not a way of securing kindly consideration of this principle in education? Sympathy with it is expressed by two of the superintendents in their dissenting reports.

It makes no difference whether Herbart thought the faculties of the soul were bipartite or tripartite. He did make many obvious psychological blunders. They all say that, except in minor points it makes no difference. They are building upon the child. It will result in this thing — the individualizing of the child, and you have got to face it.

SUPERINTENDENT S. T. DUTTON, *Brookline, Mass.:* About all has been said that needs to be said now. It seems to me that the question takes this form — the same God that made the child made the world about him. The purpose of those who mean to work out something better is to find how the child should be taught. My friends, we do not recognize the value of this report. Dr. Harris said very distinctly that the course of study in point should include the whole round of human knowledge. Now there are two things that have helped me in this matter. My view is singularly different from Dr. White's. If correlation makes the kindergarten what it is, it seems to me that it should go on. It seems to me that, in a certain way, this is true in the first year, in the second, etc.

This cross section brings in so many things we find imposed upon the schools that certain confusion and certain difficulties have been found in working out the Herbartian plan. The only way is the working out of these principles. If that is not done, we shall have reaction. I am not afraid that this work shall be retarded because of this report. Every teacher ought to understand this discussion of educational values. It ought to help us; it will help us. If this report is not complete, it will be completed in the good works of teachers in all this country. [The chair here announced that Colonel Parker and Dr. Harris would be asked to close the debate.]

COLONEL PARKER: Shall we study this question with open and unprejudiced minds? I am not a Herbartian. I simply ask the most careful study of all these questions and systems. There was a time when method seemed to be incarnated. Now, in regard to this report and the eminent philosopher who wrote it, I would not say one word except of the most profound respect. I am never going even to make a pun before a teachers' meeting hereafter. When Dr. Harris says I do not believe in grammar, he should say that I do not believe in certain methods. I respect butterflies and grubs, but I respect language. When Dr. White says that certain

things are plain by concentration, he says what I know nothing about. Herbart said of Pestalozzi that his great merit did not consist in his method and his means, but in his sublime zeal. He who faces this question of education faces infinity. I protest against unfair statement as to discipleship, following leader, and so forth. I acknowledge that I make such statements myself, but I hope to do better. When Dr. White speaks of the great giants, we have but to look at him and know it is true. But do we ever question what has been lost? We are facing the great problems of the twentieth century, and the present methods of teaching are not equal to their solution. Under God, let us find the truth and follow it. Let us have the means of knowing what each teacher and each superintendent is doing for the child. Let us not lay down a great educational doctrine and say that it is sufficient. The Sermon on the Mount is sufficient for nineteen centuries; but what we want is an application of Hegel, of Herbart, and of the wisdom of all other philosophers to the problems of the future. All hail the future!

DR. W. T. HARRIS: I wish to add one remark as to the meaning of correlation by calling attention to its etymology. I was not unfamiliar with the use of that word in the place of concentration as given by Herbart.

I have traversed that field in geography which begins with the obstacles which man has to overcome by traversing the rivers and the mountains in commerce. The child goes in two directions — one sociological, which carries the same climate everywhere; the other, which gives extremes.

I wish to say that this is not a philosophical study, Hegelian or otherwise, but a scientific study which I began in 1870 without any following. I did not get so repelled by grammar as some of my friends, although I did not like it very well. Now, scientific study, such as this child study — you cannot speak too highly of it, unless you speak as at least four speakers did to-day. Child study is not the only thing. Child study is an example of a careful application of scientific methods as special study. Instead of becoming prejudiced against it, let us make an inventory of what it has for us. They have not gone much into the genesis of these things, but they will. [Applause.] Now the child is being studied scientifically and properly, but those who are studying seem to think that is the only thing. This report has attempted to consider more than child study, because more was needed. The institutions of man may be seen from five sides, and there are the five windows of the soul, which you must know about or else all your child study goes for nothing. Find what there is to be correlated, and then correlate it. [Applause.]

OUR BOOK TABLE.

A DICTIONARY OF CLASSICAL ANTIQUITIES — MYTHOLOGY, RELIGION, LITERATURE, AND ART. From the German of Dr Oskar Seyffert Revised and edited, with additions, by Henry Nettleship, M.A., and J. E Sandys, Litt D. With more than 450 illustrations. New York: Macmillan & Co. 716 pp. Price $3 00.

The study of the classics, by modern methods, makes familiarity with classical antiquities more and more a necessity. Most of the books on this subject have had the misfortune to be in fine type, and largely without illustration, while this work has elegant typography and print, with large, numerous, and fine illustrations; in short, it is a German presentation of classical antiquities for the modern scholar. It compasses the mythology and religion, literature and art of Greece and Rome. It is all that a dictionary of Greek and Roman antiquities is supposed to be, while it supplies information on matters of mythology and literature, which make it in the broadest sense a classical dictionary. In addition to all that would inevitably come within its scope, it gives a general and comprehensive view of Greek and Roman philosophy, history, rhetoric, literature, architecture, painting, sculpture, music, and the drama While retaining all that the German author gave to the work, the translators have so far edited and added to the work as to adapt it to English students.

THE SCHOOLMASTER IN COMEDY AND SATIRE. A companion volume to "The Schoolmaster in Literature." New York: American Book Company. 600 pp. Price, $1 40.

This is a teacher's book, full of interest. It accepts the theory that there is a special professional culture possible for teachers, and brings to the reading circle, or to the teacher in his private studies, a multitude of selections which introduce us to all that is classic and semi-classic in the references to the schools and school men, in comedy and satire.

5,000 WORDS OFTEN MISSPELLED By William Henry Payffe. New York: G. P. Putnam's Sons. Cloth. 303 pp. Price, 75 cents.

This is the sixth work of the same general character that this author has produced. Four of these are devoted to pronunciation and two to spelling. No one else has succeeded in getting up a book of this kind that is, in size, type, comment, and appendix, at once so reliable and so serviceable.

MAYNARD'S ENGLISH CLASSIC SERIES. With explanatory notes. "The Book of Job." Edited by Samuel Macaulay Jackson, LL. D., Cloth. 88 pp. Price, 24 cents. New York: Sheldon & Co.

It is refreshing to have this masterpiece recognized and treated as a classic. For such a noble work to be in the sacred cavern is to ensure its adoration by a multitude whose reverence for its truth blinds them to its literary merits. Here, printed and bound like any other classic, helpfully annotated, it will be respected from a different standpoint, from which it need lose nothing and may gain much.

THE HISTORY OF EDUCATION IN DELAWARE. By Lyman P. Powell. 186 pp. The Bureau of Education, Washington.

This volume by Lyman P. Powell of the University of Pennsylvania is one of the best of the contributions to educational history which Professor Adams is editing for the Bureau of Education. Mr. Powell has been very successful in his search for material, illustrating his subject, both in the colonial and later times, and he presents it in a scholarly and carefully considered manner, which might well be taken as a model for the other volumes of this series. Mr. Powell devotes a large share of his space to the period preceding 1839, for he is writing a history of education, and not a discussion of the existing system, and the various academies and colleges of the state each receive ample treatment. There is an extremely useful summary of the work of Willard Hall, "the Horace Mann of Delaware," to whom the state owes its public school law of 1829 The later legislation is quoted quite fully and is exemplified by abundant statistics, and by quotations which show the actual conditions of the public schools at different periods.

HAND-BOOK OF INDUSTRIAL DRAWING FOR COMMON SCHOOLS. By Ida A. Tew. Beatrice, Neb: Express Publishing Company. Boards. 110 pp. Price, 50 cents.

A teacher, out of her daily work in the schools as a supervisor of drawing and constant contact with the teachers as their director and instructor, has produced a book which gives precisely what they have shown themselves to need and desire. The chief aim of the book is to help the teacher to know the subject. It makes no attempt to be comprehensive, but it is thoroughly suggestive. While Miss Tew is artistic in her ideals and methods, she is profoundly convinced that drawing is not merely an ornamental study, but that it has high value from an educational standpoint. She realizes that the common school is not an art school but an educational institution, and that drawing is to be taught that the mind shall be educated through the training of the hand, both directly and through reaction. Her appreciation of the place of art in education does credit to her intelligence, as the method of application does to her pedagogical skill. Within these 110 pages she treats of constructive drawing, decorative drawing, and pictorial drawing.

No. II. in the "National School Library of Song," Ginn & Co., Boston, is for advanced grades. The music is adapted to mixed voices in four parts, but is kept within the range and character of the voices of the young pupils of the advanced grades of the public schools. The songs are bright and sweet, all such as the children will sing with delight and enthusiasm. The songs are prefaced by advanced solfeggios, for exercises in training the voice to the advance in range and harmony of the songs. The tenor part has received especial note in these exercises, but the first twenty are arranged so that they may be sung without the tenor, when desirable. By following the graded index, the songs may so be taken as to make the book a progressive study.

BOOKS RECEIVED.

LITERATURE PRIMERS: AMERICAN LITERATURE. By Mildred Cabell Watkins Price, 35 cts. New York: American Book Company.

MEDITATIONS IN MOTLEY. By Walter Blackburn Harte. Boston: The Arena Publishing Company.

FERNS AND EVERGREENS OF NEW ENGLAND. By Edward Knobel. Boston: Bradlee Whidden.

BOW-WOW AND MEW-MEW. By Georgiana M. Craik. New York: Maynard Merrill, & Co.

A PRIMER OF MAYAN HIEROGLYPHICS. By Daniel G. Brenton: Boston: Ginn & Company.

SELECT POEMS OF SIDNEY LANIER. Edited by Morgan Callaway. Price, $1 00. New York: Charles Scribner's Sons

HERB ET AND THE HERBARTIANS. By Charles De Garmo Price, $1.00. New York: Charles Scribner's Sons.

VOICE, SPEECH, AND GESTURE. By Hugh Campbell, R. F. Brewer, and Henry Neville. Price, $3.00. New York: G. P. Putnam's Sons.

DEUTSCHE GEDICHTE. Selected with notes by Camillo Von Klenze, Ph.D. New York: Henry Holt & Co.

HEART TREASURES. By Fannie A. Damon. Buffalo: Charles Wells Moulton.

KLEINE GESCHICHTEN. With notes by Dr. William Bernhardt. Price, 30 cents. Boston: D C. Heath & Co.

THE WORKS OF CHAUCER. Edited by Rev. Walter W. Skeat. New York: Macmillan & Co.

ALWAYS STRONG AND HAPPY By J R Judd. Price, $1 50. New York: Outing Publishing Company.

A TRAVELER FROM ALTRURIA. By W. D. Howells. Price, 50 cents New York: Harper & Brothers

MASSACHUSETTS YEAR BOOK—1895 Compiled by A. S. Roe. Price. $1 00 Worcester: F. S. Blanchard & Co

LATIN GRAMMAR IN A NUTSHELL. Price, 15 cents. Lebanon, O.: March Brothers.

A Local Agent in each County is wanted by the Teachers' Co-Operative Association, 6034 Woodlawn Avenue, Chicago, Ill.

Department of Mathematics.

All communications intended for the Department of Mathematics should be addressed to the Editor, **F. P. MATZ, M.A., M.Sc., Ph.D., Reading, Pa.**

---

(80) By C. J. SMITH, *Denver, Col.* — Solve by the method for homogeneous quadratics,

$$x^2 + xy + y^2 = a \ldots (1), \quad y^2 + yz + z^2 = b \ldots (2),$$
$$\text{and} \qquad x^2 + zx + z^2 = c \ldots (3).$$

Solution by the Editor.

The operations [(2) — (1)] and [(2) — (3)] give, respectively, the equations: —

$$(z - x)(x + y + z) = b - a \ldots (4),$$
$$\text{and} \qquad (y - x)(x + y + z) = b - c \ldots (5).$$

After dividing (5) by (4), etc.,

$$\frac{y - x}{z - x} = \frac{b - c}{b - a}, = m \ldots (6).$$
$$\therefore y = mz - (m - 1)x \ldots (7).$$

Eliminating y from (1) by means of (7), etc.,

$$m^2z^2 - m(2m - 3)zx + (m^2 - 3m + 3)x^2 = a \ldots (8).$$

By the method for homogeneous quadratics the values of x and z are found from (3) and (8).

$$\therefore x = \frac{a + c - b \pm \frac{1}{3}\sqrt{[12ab - 3(a + b - c)^2]}}{\pm\sqrt{\{2(a + b + c) \pm 2\sqrt{[12ab - 3(a + b - c)^2]}\}}},$$

$$\therefore y = \frac{a + b - c \pm \frac{1}{3}\sqrt{[12ab - 3(a + b - c)^2]}}{\pm\sqrt{\{2(a + b + c) \pm 2\sqrt{[12ab - 3(a + b - c)^2]}\}}},$$

$$\therefore z = \frac{b + c - a \pm \frac{1}{3}\sqrt{[12ab - 3(a + b - c)^2]}}{\pm\sqrt{\{2(a + b + c) \pm 2\sqrt{[12ab - 3(a + b - c)^2]}\}}}.$$

[Elegantly solved by H. GOODENOUGH, *Scranton, Pa.*]

---

(85) By W. D. J., *Cumberland, Md.* — A merchant sells 25% above cost, and allows a discount of $5 on every *fifty* dollars' worth sold. Required the merchant's rate per cent. of *net* profit, if his weights and measures are 12½% "short."

Solution.

Actual selling price is $P = \frac{9}{10}$ of $\frac{8}{7}$ of $\frac{135}{100}$ of *Cost* $= \frac{9}{10}$ of $\frac{8}{7}$ of $\frac{135}{100}$ of 100% = 128⅔%. Hence, the rate of *net* profit is 28⅔%.

---

(90) By MISS NORA BURNS, *Sedalia, Mo.* — The price of diamonds per carat varies as their weight. If a diamond of 2 carats costs $160, what is the weight of a diamond worth $1,000? Is the answer, 5 carats, correct as to fact?

Solution.

$160 : $1,000 :: $2^2 : x^2$. $\therefore x = 5$ carats, which is the weight required.

---

(91) By MAUD, *Albert Lea, Minn.* — The time required by a train 100 yards long and running 50 miles per hour, in crossing a bridge, is 20 seconds. How many feet long is the bridge?

Solution.

Obviously, in one second, the train moves $\frac{2200}{60}$ yards; and in 20 seconds the train moves $488\frac{8}{9}$ yards. Hence, the length of the bridge is $(488\frac{8}{9} - 100)$ yards, $= 388\frac{8}{9}$ yards, $= 1{,}166\frac{2}{3}$ feet.

[From B. W. DRESDEN, *West Bend, Wis.*, were received good solutions of problems 90, 91, 92, 93, 94, and 99.]

---

(92) J. W. HORTON, *West Chester, Pa.* — My agent in Chicago sold 1,250 planks, each 16 by 1¼ feet and 3 inches thick, at $15 per M., less 10 and 5% discount. His commission is 1½% on the net amount of the sale. With the proceeds of the sale he bought a 90 day draft at 8% exchange 1½% discount; what did he pay for the draft?

Solution by B. W. DRESDEN, *West Bend, Wis.*

The *gross* cost of the 75 M. feet of planks at $15 = $1,125, and the *net* cost = $961 875. Hence, the *face* of the draft = $947.-446875; and the *cost* of the draft = $916.02+.

Fourth Revised Edition

DANA'S

Manual of Geology

Treating of the Principles of the Science with Special Reference to American Geological History. By JAMES D. DANA, Yale University. Cloth, 1088 pages, over 1575 figures, and two double-page maps. Price, $5.00, prepaid.

Entirely rewritten and reset in new type. Introduces new principles, new theories, and new facts relating to all departments of the science. Much additional matter; improved arrangement; largely increased number of illustrations; all enhancing the value of the work, and making it more than ever worthy of its proud position as the

Standard Manual of Geology in America.

Sent postpaid to any address on receipt of price.

AMERICAN BOOK COMPANY

New York Cincinnati Chicago Boston Atlanta Portland, Ore.

EDUCATIONAL INTELLIGENCE.

MEETINGS TO BE HELD.

March 15–16: The Central Illinois Teachers' Association, Peoria.
March 28–30: Southeastern Nebraska Educational Association, Beatrice.
June 18–20: Missouri State Teachers' Association, Pertle Springs.
July 5–12: National Educational Association, Denver, Col.
July 9–12: American Institute of Instruction, Portland, Me.

[*For additional Ed. Intelligence see page* 170.]

NEW YORK.

There will be several women on the New York city board of education during Mayor Strong's administration.

OHIO.

The Cincinnati normal school had a very attractive programme for the twenty-sixth graduating class, February 21.

The *Ohio Educational Monthly*, an excellent journal, with age, dignity, and power, has been purchased by State Superintendent O. T. Corson, and will be published at Columbus in the near future. Mr. Corson has great business enterprise, has the personal loyalty of the schoolmen of the state, and is sure to make a good professional journal.

PENNSYLVANIA.

The Educational Club of Philadelphia normal school for girls held its regular monthly meeting on March 1. The programme consisted of "The Question of Teachers' Salaries," by Mr. John P. Garber, and discussed by Professor S. N. Patton and Dr. N. C. Shaeffer.

SOUTH CAROLINA.

By the unanimous vote of the board of trustees, Professor D. B. Johnson, the able superintendent of the Columbia graded schools, was elected president of the State Normal and Industrial College at Rock Hill. Professor Johnson has taught successfully in a number of teachers' institutes in this and other states. He also organized the School Superintendents' Association of South Carolina, and was its president three years, and was vice-president of the National Association. This extensive knowledge of institutions of learning was recognized and utilized in his appointment by the governor as chairman of the commission to investigate and report to the legislature upon the establishment by the state of a State Industrial College for women.

The meeting of the board took place in the executive chamber, all the members being present, viz: Governor John Gary Evans, J. E. Ellerbe, D. W. McLaurin, W. A. Brown, J. E. Brazeale, Dr. A. C. Fuller, Dr. A. C. Crawford, Dr. E. S. Joynes, W. J. Roddey, H. B. Buist, A. H. Patterson, W. N. Elder. The reports of the executive committee, the chairman, and secretary were read. W. D. Mayfield was elected treasurer of the board, and, as above stated, Professor D. B. Johnson was unanimously elected president of the college.

May 15 was fixed as the time for electing the other officers of the college.

TEXAS.

The institute for Houston schools for March will be held on the 8th. The primary section will study "Guiding Maxims." The intermediate section will be prepared to recite upon topics treated in the seventh chapter of Compayre's "Psychology Applied to Education." The subject assigned for discussion by the general division is "Method-wholes and Their Treatment."

WEST VIRGINIA.

In this connection it might be stated that Senator Davis, a short time ago, sent a letter to Governor McCorkle offering to donate $50,000 toward the establishment of a girls' industrial school, besides the necessary grounds, at an accessible point, such as Davis or Elkins. Letters were also sent by Mr. Davis to several members of the legislature of that state, calling attention to the offer which he has made. It is understood that the offer of Mr. Davis will be accepted and the school will be established. It is also the general belief that the school will be located at the town of Elkins.

NEW ENGLAND.

MASSACHUSETTS.

March 9 is the date set for the annual meeting and dinner of the Harvard Teachers' Association at Seaver hall, Harvard University. This annual meeting will be open to the public, and teachers and school officers are especially invited. The business session will open at 9 30 a.m., and will be immediately followed by the reading of papers and a general discussion of the same. The programme consists of the following: "Educational Aims and Educational Values," by Paul H. Hanus, Harvard University; "The Educational Values of History," by Anna Boynton Thompson, Thayer Academy, South Braintree; "The Educational Values of English," by George H. Browne, Browne and Nichols School, Cambridge; "The Educational Values of the Modern Languages," by Hugo K. Schilling, Harvard University; "The Educational Values of the Classics," by William W. Goodwin, Harvard University; "The Educational Values of Natural Science," by John F. Woodhull, Teachers' College, New York city; "The Educational Values of Mathematics," by Hon. Frank A. Hill, secretary of the Board of Education of Massachusetts. After dinner Professor Charles Eliot Norton of Harvard University will speak on the educational importance of the history of the fine arts, and Edwin D. Mead of this city will speak on the educational value of art in the public schools.

The birthplaces of 5 213 pupils of Brockton are given by Superintendent B. B. Russell: 54 per cent in Brockton, 25 per cent. in other Massachusetts communities, 7 per cent. in other states of the union, 3 per cent. in the Provinces, 2 per cent. in Sweden, 2 per cent. in England, nearly 2 per cent. in Ireland, and a small fraction from Scotland, Denmark, Germany, Russia, and Poland. In brief, 89 per cent. were born in the United States, 4 per cent. elsewhere in America, 7 per cent. in Europe.

Norwood has attained such results in vertical penmanship that an exhibition has been made at the exhibition rooms of the Boston Merchants' Association on Bedford street.

CONNECTICUT.

The Yale College library has sent out a circular letter to the alumni asking for funds. The appeal is due largely to the fact that the $50,000 left by the

STATE OF OHIO, CITY OF TOLEDO, } ss.
LUCAS COUNTY.

FRANK J. CHENEY makes oath that he is the senior partner of the firm of F. J. CHENEY & Co., doing business in the City of Toledo, County and State aforesaid, and that said firm will pay the sum of ONE HUNDRED DOLLARS for each and every case of Catarrh that cannot be cured by the use of HALL'S CATARRH CURE.

FRANK J. CHENEY.

Sworn to before me and subscribed in my presence, this 6th day of December, A.D. 1886.

[SEAL.] A. W. GLEASON, *Notary Public.*

Hall's Catarrh Cure is taken internally and acts directly on the blood and mucous surfaces of the system. Send for testimonials, free.

F. J. CHENEY & CO., Toledo, O.

☞ *Sold by Druggists.* 75c.

WE Want Teachers for Vacancies which are constantly occurring in good Schools, where good salaries are paid. **Register Now.**

Eastern Teachers' Agency
Miss E. F. FOSTER, Manager,
50 Bromfield Street,
BOSTON, MASS.

YOU Want the services of a Live Agency to give you information of Vacancies and secure your advancement. **Register Here.**

LITERATURE FOR SCHOOLS AND COLLEGES.

AMERICAN POEMS.

Selected from the works of Longfellow, Whittier, Bryant, Holmes, Lowell, and Emerson. Edited by HORACE E. SCUDDER. With Biographical Sketches and Notes. Revised Edition. Printed from new plates. 12mo. $1.00, *net.*

AMERICAN PROSE.

Complete selections from the Writings of Hawthorne, Irving, Longfellow, Whittier, Holmes, Lowell, Thoreau, and Emerson. Edited by HORACE E. SCUDDER. With Introduction and Notes. Revised and Enlarged Edition. Printed from new plates. 12mo. $1.00, *net.*

STUDENTS' SERIES OF STANDARD POETRY.

For Schools and Colleges. (Uniform with Rolfe's Shakespeare.) Edited by W. J. ROLFE, Litt.D. A carefully Revised Text; Copious Explanatory and Critical Notes; numerous Illustrations. Scott's "Lady of the Lake" and eight other volumes. All these are equally suited to the use of the student and of the general reader. They should have a place in every library, public or private. Each volume, 75 cents; to teachers, for examination, 53 cents.

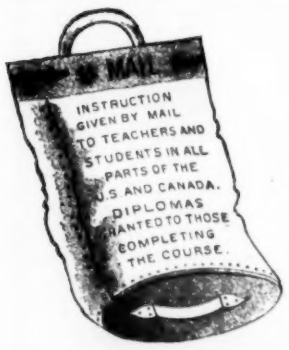
PRIMER OF AMERICAN LITERATURE.

By CHARLES F. RICHARDSON, Professor of English Literature at Dartmouth College. A new and revised edition, with full Index, and Portraits of twelve of the most prominent authors. 18mo. 30 cents, *net.*

IN ADDITION to these books the publishers have many others on their list suitable for literary work in Schools and Colleges. Among them may be mentioned the **Riverside Literature Series,** of which over eighty numbers have already been published, containing *complete* masterpieces of the best authors, suitable for Primary, Grammar, and High Schools. Each single number, 15 cents, *net.* **Modern Classics,** a school library of the choicest quality, for $11.56, thirty four volumes neatly bound in cloth, each volume, 40 cents, *net;* and **Masterpieces of American Literature,** $1.00, *net.*

Descriptive circulars, giving the Table of Contents of each of the books mentioned above, and of each number of the Riverside Literature Series, and of each volume of the Modern Classics, will be sent to any address on application.

HOUGHTON, MIFFLIN, & COMPANY,
4 Park St., Boston. 11 E. 17th St., New York. 28 Lakeside Building, Chicago.


MAIL
INSTRUCTION GIVEN BY MAIL TO TEACHERS AND STUDENTS IN ALL PARTS OF THE U.S. AND CANADA.
DIPLOMAS GRANTED TO THOSE COMPLETING THE COURSE.

TEACHERS!

You need not attend school to secure a Normal Education. **Remain at home,** continue your teaching, and pursue the Normal courses (Elementary and Advanced), and you will be able to pass a higher grade examination, to secure a better certificate, become a better teacher, and thereby secure a better salary. **Over 7,000 students enrolled since 1889.** Diplomas granted. No new books need be purchased, and from one to three hours' study, daily, is sufficient. Improve your spare moments, save cost of board and railroad fare by taking our Normal Courses.

Tuition for a thirteen weeks' course, $5. Special tuition of $3 to the person sending a list of ten teachers' names.

Send for our 20-page Catalogue.

Address **AMERICAN CORRESPONDENCE NORMAL,**
☞ When writing mention this paper. **Lock Box 1000, Dansville, N. Y.**

Martha's Vineyard Summer Institute.

The Oldest and The Broadest. *The Largest and The Best.*

EIGHTEENTH ANNUAL SESSION. *Beginning July 8, 1805.*

SCHOOL OF METHODS.—Four Weeks. 28 Instructors.
SCHOOL OF ORATORY.—Four Weeks. Faculty of Emerson College of Oratory.
15 ACADEMIC DEPARTMENTS.—Five Weeks. 21 Instructors.

Full courses in Drawing, Form Study, and Color. New Laboratory for Chemistry and Physics. A new large **AUDITORIUM** to be dedicated at the opening of the session.

Entirely New Plan of Arrangement for Cafe.

The attendance last year was over 700 from 35 States and countries, making this by far the **largest Summer School** for teachers in the United States.

Send for **64-page** circular, giving full information in regard to the outlines of work in all departments, advantages offered, railroad reductions, tuition, club and combination rates, board, etc.

W. A. MOWRY, *President.* Hyde Park, Mass. **A. W. EDSON,** Worcester, Mass.

FIFTH EDITION NOW SELLING.

JOHN FISKE'S HISTORY OF THE UNITED STATES FOR SCHOOLS.

With Topical Analysis, Suggestive Questions, and Directions for Teachers, by FRANK ALPINE HILL. With 220 illustrations (including maps not colored), 5 full-page colored maps, and 2 double-page colored maps. 12mo. Half leather. 495 pages. $1.00, *net.*

"Fiske's History of the United States has been in use in the eighth class of this school since September, 1894. It seems to interest the pupils to a greater extent than any history which I have used before. I consider it the best book that I know of for school use."—MARIA E. GARDINER, *Bigelow School, Newton, Mass.*

Descriptive circulars with commendations from teachers who have used the book in their classes will be sent to any address on application.

HOUGHTON, MIFFLIN, & COMPANY,
4 Park St., Boston. 11 E. 17th St., New York. 28 Lakeside Building, Chicago.

ARBOR DAY IS COMING

HERE ARE SOME HELPS YOU WILL WANT

Exercises for Arbor Day.

By ANNIE I. WILLIS. Paper, 64 pages. Price, 25 cts.

In addition to the exercises, this little book contains valuable suggestions on what trees to plant and how to plant them; a list of appropriate selections from popular authors, and suggestions for essays.

Native Trees.

A Study for Home and School.

By L. W. RUSSELL, Providence, R. I.

Second Edition. Revised and Enlarged. Illustrated. Price, 80 cts.

The author has written about trees as he has seen them, in walks and rambles in town and country. It is wholly unlike anything that has ever before been published on the subject.

THE SCHOOL JOURNAL, New York city: "For the general reader the scientific descriptions of trees in Botanies are too technical and contain too many hard names. The beginner needs something more simple. Mr. Russell has endeavored to furnish it. In encouraging pupils to observe and study trees, teachers will unquestionably find this little book of great assistance."

Dick's Festival Reciter.

Containing elaborate Exercises, Programmes, Prize Songs, and Marches for Arbor Day, Memorial Day, etc.

Paper Binding. Price, 30 cents.

Arbor Day Stencils.

Sold only in sets, 25 cents.
California Giant.
Charter Oak.
Washington Elm.
God Bless Our Trees.

Plant Charts.

10 cents each.

Size, 24 x 36 inches.

1. Types of Roots.
2. Margins, Bases, Shapes of Leaves.
3. Types of Corollas.
4. Type of Crowfoot Family.
5. " " Mustard "
6. " " Rose "
7. " " Composite "
8. " " Mint "
9. " " Lily "
10. " " Pulse "

These charts, from 4 to 10, each show flowers, stalk, leaves, and parts of flowers enlarged.

Address **NEW ENGLAND PUBLISHING COMPANY, 3 Somerset St., Boston.**

☞ When writing to advertisers please mention this journal.

Phelps estate, and which was to have been used in aid of the library, has now been expended in the construction of a gateway between Lawrence and Welch dormitories.

The new normal building at Willimantic, so long waited for, is now nearly ready for occupancy. The building was designed in the form of a cross, the erection of the north wing, however, has been deferred for the present. The width of the building from east to west is 118 feet, the depth (exclusive of the north wing) is 86 feet.

There are four floors. On the ground floor are the cloak room; the physical laboratory, 56 x 25 feet; the science classroom, 24 x 30 feet; a room for manual training, and two recitation rooms. On the floor above are the reception room, the principal's office, the assembly room, the library, and the English classroom. The library is an attractive room, 46 x 23 feet. The library and assembly room are adjacent, and the English room is just across the hall from the library. The two remaining floors are similarly divided into rooms The gymnasium and the chemical laboratory are both on the top floor.

The seats and desks in the general study room are of the most approved pattern — readily adjustable to the height of the pupils.

The heating and the ventilation have both been carefully provided for. A large fan in the cellar forces air over steam-pipes into the rooms, and a second fan near the roof exhausts the air, thus maintaining a constant supply of warm fresh air in all weathers.

The model schools are on the south side of Valley street, just opposite the new building. The value of the model schools to the normal school will be greatly increased by their nearness.

An experiment in work upon the "departmental plan," so called, undertaken in the two rooms occupied by the seventh grade, merits brief mention. These rooms were under the charge of Misses Hinckley and Rose as teachers.

The various branches of study pursued in this grade were divided between the two teachers as equitably as possible, and each teacher was held responsible for progress in those branches assigned her in both rooms. As each teacher finished teaching a given subject in one room she passed to the other room and taught the same subject. By this plan the teacher, not having more than half as many subjects to prepare, is able to do more thorough work and is likely to teach with more enthusiasm. She comes to her class with something of the power and readiness of a specialist, and exerts in consequence a stronger influence.

The plan, as practiced, brought forth excellent fruit, and will be continued upon a broader scale during the current year.— *From Annual Report of Superintendent N. L. Bishop, Norwich, Conn.*

THE MAGAZINES.

—An important feature of the March *St. Nicholas* is a new jungle story by Rudyard Kipling, one of his most striking. Professor Brander Matthews contributes a sketch of Hawthorne to his series of studies of great American authors. Professor Hjalmar Hjorth Boyesen, in "The Boys' War," has a story of boy life in Norway. The serials by Howard Pyle, Albert Stearns, Jesse M. Anderson, and Eldridge S Brooks, have interesting installments. Professor W. T. Hornaday writes in his usual lively style of "Br'er Rabbit and His Folks." This is one of the most familiar families among American quadrupeds, but Professor Hornaday brings together many new facts about rabbits and hares. New York: The Century Co.

— The complete novel in the March issue of *Lippincott's* is "A Tame Surrender," by Captain Charles King. Two brief scientific articles are supplied by George J. Varney, "Electric Locomotives on Steam Roads," and "The Story of the Gravels," by Harvey B. Bashore; "A Glimpse of Cuba," by James Knapp Reeve, is a vivid and readable sketch. Isabel F. Hapgood writes of "Furs in Russia," and W. D. McCrackan on "A Question of Costume." Professor William Cranston Lawton discusses "The Artist's Compensations," Professor H. H. Boyeson furnishes "A Youthful Reminiscence," and C. W. Lucas, as "Doolittle," writes "An Open Letter" to Mrs. Grundy. The poetry of the number is by Professor Charles G. D. Roberts and Richard Burton. New York.

— *He* — "Higbee would have run through his fortune in a month if it hadn't been for his wife."
She — "How did she prevent it?"
He — "She spent it herself."— *Brooklyn Life.*

Minimum Salary Desired, $75 per month.

Salary Secured, $1000 per year.

Act I.
Mrs. S. applied to the NORTH WESTERN TEACHERS' AGENCY last spring, with the understanding that she desired at least $75 PER MONTH.

Act II.
PRINCIPAL C. of a State Normal School wrote me for a *Teacher of Mathematics.* I recommended MRS. S. and *no other. She was employed.*

Moral.
Send to the **North-Western Teachers' Agency** for application blanks. Address J. H. MILLER, *Lincoln, Neb.*

FOREIGN TOURS.
Strictly first class; small, select parties; choice of 18 routes; personally conducted; annually since 1881; prices, $184. $218, $278. $316, etc.; sailings, June 21 and 29; descriptive pamphlet sent.
Supt. F. MARTIN TOWNSEND, *Marshall, Mich.*

FORTY-TWO ESCORTED PARTIES
BETWEEN
May 18 and July 13 to **EUROPE** From $175 to $750,
and from 31 days to 101 days' duration.
Mention this paper, state time and money at disposal, or trip desired, and programmes will be sent.
INDEPENDENT *tickets everywhere.* OCEAN *tickets.*
H. GAZE & SONS, Ltd., 113 Broadway, N. Y.
201 Washington St., Boston, Mass.
135 So. Fifth St., Philadelphia, Pa.
204 So. Clark St., Chicago, Ills.

DIPLOMAS!
Yes, indeed, and beauties, too. In stock and to order. Steel plates, lithographs, and etchings. New designs, expressive wordings. Also the best and cheapest Reports, Records, and General School Supplies. Please state kind and size of school, and write names plainly.
Sheppard & Burgett,
Bar 431. Columbus, Ohio.

WANTED, at once: *Teachers* — 3 Superintendents, 5 Principals, 2 College Presidents, 4 Piano, 2 Vocal, 5 Art, 2 Elocution, 9 Primary, 5 Kindergarten 4 Governesses, 3 Latin, 2 Greek, 5 Mathematics, for fall term. Address, with stamp, COLUMBIAN TEACHERS' BUREAU, Vanderbilt Building, Nashville, Tenn. 10-1t

HOW TO SUCCEED.
A well-written treatise on Personal Magnetism and its development, to assure improvement in life can be had by mentioning name and date of this paper and enclosing 10c, to Prof. Anderson, Masonic Temple, Chicago. This book should be read by everyone as it means the betterment of moral, mental and physical manhood and womanhood. 100 pp. book on HYPNOTISM, 10c. Large book $2.

WANTED.
September next, in a first class New York academy, three young men to take charge of three departments of the school, viz: Preparatory English, Classics and Sciences, and French, German, and Vocal Music (choral and glee club). Good salaries paid for satisfactory teachers. Apply immediately to
HIRAM ORCUTT, Manager,
N. E. Bureau of Education,
3 Somerset St., Boston.

TEACHERS!
The book that is now being widely used as a supplementary reader is
"THE CENTURY BOOK FOR YOUNG AMERICANS."
It is "the story of the Government," by Elbridge S. Brooks, describing the adventures of a party of bright young people in Washington, and what they learned there: how the Government was founded, what are the duties of the President, Congress, Supreme Court, various departments,—the making of the flag, etc. *It combines a delightful story with the helpfulness of a history.* Issued under the auspices of the Society of the Sons of the American Revolution, with preface by General Horace Porter. 250 large pages, 207 engravings. Price $1.50 at retail, with special rates to schools. *A single sample copy sent to any reader of this paper for $1.00,*—money refunded if book is returned.
The Century Co., Union Square, New York.

AGENTS WANTED.
Address
NEW ENGLAND PUB. CO.,
3 Somerset St., Boston, Mass.

Teachers Wanted! Teachers Co-operative Association, 6034 Woodlawn Ave., Chicago. 4,000 positions filled.

UNIVERSITY OF MICHIGAN
Summer School.
During the summer of 1895, from July 8 till August 16, courses of instruction will be given in Latin, French, German, English Literature, English Language and Composition, Philosophy, Mathematics, Physics, Chemistry, Astronomy, Biology, Drawing and Machine Design. Surveying, Civil Engineering, Histology, Botany, Music, and Law.
Tuition rates will be as follows: One course, $15.00; two courses by the same student, $25 00; three courses, ditto, $30 00.
Cost of board and rooms will vary from $3 00 to $5 00 a week.
For announcement containing full information address
JAMES H. WADE,
Secretary of the University of Michigan
[10-m 4t] ANN ARBOR, MICH.

TEACHERS who are UNEMPLOYED
or those who want profitable **Vacation Work**
can secure a desirable engagement by addressing
C. B. BEACH & CO., Lakeside Bldg., Chicago.

FREE ONE DOLLAR MUSIC BOOK.
In one hour you can learn to accompany on the **Piano** or **Organ** by using Clark's Lightning Chord Method. **No Teacher Necessary.** Should be on every Piano or Organ. A limited number given away to introduce. The price of this book is $1.00. but if you will talk it up and show it to your neighbors, we will mail you **one copy free.** Send 15 cents for mailing Address Musical Guide Publishing Co., Cincinnati, Ohio. Mention this paper. 6

Diplomas
(Highest Award World's Fair)
In stock to suit any kind of school at small cost. The designs are new, original, artistic. Lithographed. Orders filled the day rec'd. Special designs to order. Samples—by giving name of school, number needed. Programs, etc, for commencement. *Mention this paper*
C. L. RICKETTS, Opera House Bldg., CHICAGO.

Educational Institutions.

Boylston, cor. Berkeley, Back Bay, Boston.
Berkeley School, Y. M. C. A. Bldg.
A co-educational preparatory school of the highest grade its certificate admits to all colleges accepting certificates. Pupils sent yearly to Institute of Technology, Harvard and Boston Universities, Law and Medical Schools, etc. Catalogs forwarded. Eleventh year begins Sept. 24.
w TAYLOR, DEMERITTE, & HAGAR.

COLLEGES.
BOSTON UNIVERSITY. Seven Colleges and Schools Open to both sexes. Address the Registrar. w

NORMAL SCHOOLS.
MASS STATE NORMAL ART SCHOOL, established for the advancement of art education and training of teachers in all branches of industrial drawing. For circular and further particulars apply at the school, Newbury, corner of Exeter Street, Boston.
w G. H. BARTLETT, Principal.

STATE NORMAL SCHOOL, FRAMINGHAM, MASS.
For circulars address
w MISS ELLEN HYDE, Principal.

STATE NORMAL SCHOOL, BRIDGEWATER, MASS.
For both sexes. For catalogs, address the Principal, w A. G. BOYDEN, A.M.

STATE NORMAL SCHOOL, SALEM, MASS.
For Ladies only. For catalogs, address the Principal, w D. B. HAGAR, Ph D.

STATE NORMAL SCHOOL, WESTFIELD, MASS.
For both sexes.
For Catalogs, address
w J. G. GREENOUGH, Principal.

Shorthand BY MAIL. Three lessons free. KERST COLLEGE, Corning, N. Y.

WILD FLOWERS OF AMERICA

Prepare for Spring Work in Botany.

Wild Flowers of America is a most superb work issued in eighteen parts. Each part contains **sixteen** beautiful reproductions in exact colors of the wild flowers that deck the meadows, hillsides, and forests of our country. The entire work contains **320** of these fine color plates. Opposite each plate is a full description of the flower, with its popular and botanical names. Many of these descriptions are illustrated with small engravings of parts of the flower. It is stated that the cost of getting up this work has been nearly **$200,000.** It can now be had of us at a merely nominal price.

OUR OFFERS.

1. FOR TWO (2) NEW subscribers to the JOURNAL OF EDUCATION at $2.50 each, we will send to any present subscriber, prepaid, a complete set of WILD FLOWERS OF AMERICA (18 parts), $2.70.

2. ONE NEW subscriber to the JOURNAL OF EDUCATION and $1.00 additional will secure a complete set of WILD FLOWERS OF AMERICA (18 parts), $2.70.

In every case the WILD FLOWERS OF AMERICA will be sent prepaid.

From the U. S. Commission of Education.

"I have examined the plates of the 'Wild Flowers of America,' collected and edited by Mr. G. H. Buek, published in parts. * * The illustrations show the coloring, shape, and size of the flowers as they grow. Nothing that has come under my notice is to be compared with this publication for the purpose of educating the people in a knowledge of botany. The price, too, is so low as to place the work at the command of every family in the country, and at least every school will place a set of these illustrations in its reference library. Very sincerely, W. T. HARRIS."

WILD FLOWERS OF AMERICA.

Name .....

Address .....

This Coupon, with 15 cents, entitles the sender to Part ..... of the "Wild Flowers of America."

This Coupon, with 15 cents, entitles the sender to Part ..... of the "Wild Flowers of America."

Address
NEW ENGLAND PUBLISHING COMPANY, 3 Somerset St., Boston, Mass.

Scott's Emulsion

of Cod-liver Oil, with Hypophosphites of Lime and Soda, is a constructive food that nourishes, enriches the blood, creates solid flesh, stops wasting and gives strength. It is for all

Wasting Diseases

like Consumption, Scrofula, Anæmia, Marasmus; or for Coughs and Colds, Sore Throat, Bronchitis, Weak Lungs, Loss of Flesh and General Debility. Scott's Emulsion has no equal as

Nourishment for Babies and Growing Children.

Buy only the genuine put up in *salmon-colored wrapper.*

Send for pamplet on Scott's Emulsion. FREE.

Scott & Bowne, N. Y. All Druggists. 50 cents and $1.

EDUCATIONAL INTELLIGENCE.

[Continued from page 168.]

CALIFORNIA.

There is every prospect of the erection of a beautiful high school building and public library building on the twenty four acre campus of the San José normal school.

San José normal school is to have $10,000 for the improvement of the plant; the Los Angeles normal school, $11,500; the Chico normal school, $11 200.

Professor Elmer E. Brown of the State University seeks needed rest in Honolulu. Mrs. Brown accompanies him.

ILLINOIS.

State Editor, J. A. MERCER, *Peoria.*

The Schoolmasters' Club met at Bloomington, February 1 and 2 The executive committee presented a printed statement of thesis to be used as a basis for the further study of the subject of 'Child Study," to which the club voted at the last meeting to devote several sessions. Dr. C. C. Van Liew of the normal university, at the request of the committee, assumed charge of the discussion, in the absence of the leader, Colonel Parker, who was kept away by a previous engagement. Dr. Van Liew conducted the discussion in a masterly manner. Friday evening was occupied with a discussion as to what avenue to the discussion of child study should be used by the club. Professor Eckoff of the chair of pedagogy in the State University uttered a warning against the approach to the subject from the physiological standpoint chiefly, and was invited to read a paper on his position at the next meeting in October. At the Saturday morning session the discussion was skilfully switched back upon the track the club had in mind in selecting this subject. We want to hear what the so-called physiological-psychologists have to propose. E. A. Eastman was reëlected president of the club, and B. P. Colton secretary and treasurer. The meetings of the current year are to be held at Bloomington. It was ordered that the evening session of the next meeting be devoted to a banquet, at which the paper of Professor Eckoff will be heard. There was a good attendance The State University and the Normal University were represented. The state department was represented by both State Superintendent Inglis and Deputy State Superintendent Kirk. Ex-Superintendent Henry Raab was also present. Nine new members were received. The next meeting will be held on October 4 and 5

The Central Illinois Teachers' Association meets in Peoria, March 15 and 16. Rev. Washington Gladden will deliver the usual Friday evening lecture, and Colonel Parker, O. T. Bright, President Draper, President Cook, and other distinguished leaders will take part in the discussions. Principal C. R. Vanderwert of Peoria is chairman of the local committee on entertainment.

Dr. Charles A. McMurry is conducting a very successful course of extension lectures before the teachers of Peoria, twelve in number.

The extension movement in Illinois is well nigh universal. This movement has gone far beyond any success of former years.

There are 1 100 pupils in the State Normal University, 575 of which are in the normal department proper.

The students, alumni, and many friends outside lament the death of Professor Thomas Metcalf of the State Normal University, where he had taught for more than a quarter of a century. Memorial exercises were celebrated at the university and were impressive and profitable to all present. Dr. Richard Edwards, ex-president of the institution, who had been associated with Professor Metcalf for more than forty years in teaching, very successfully.

The Northern Association will hold its semi-annual meeting at Joliet sometime in April.

The Southern Association holds its next annual meeting at Metropolis in August.

All persons desiring to engage entertainment in advance should secure it in advance. The price in private families is a dollar a day. C. M. Bardwell of Canton is president and J. H. Collins of Springfield is chairman of the executive committee.

INDIANA.

State Editor, ROBERT J. ALEY, *Bloomington.*

The Southern Indiana normal school, at Mitchell, is this year under entirely new management. Reports from it indicate that the attendance is good and that a high grade of work is being done

The Southern Indiana Teachers' Association will meet this year at North Vernon. Superintendent Ellis, chairman of the executive committee, promises a good programme.

Three counties,—Wayne, Henry, and Johnson,—offer high school privileges to every boy and girl within their bounds. They have, besides the city high schools, well-equipped township high schools.

February 1 the midwinter commencement of the Indianapolis high school occurred in Plymouth church. A large and strong class finished the work. Superintendent Goss is doing admirable work and winning a high place in the esteem of those who value good school work.

Butler University observed February 7 as Founder's day, it being the birthday of Ovid Butler, in whose honor the institution was named. The principal address was by the Hon. Addison C. Harris on "The Evolution of the University."

The Indiana University summer school will open on Monday following commencement and continue six weeks. Courses will be offered in English, Latin, German, chemistry, physics, philosophy, history, and mathematics. Instruction in biology will be given at the biological station established by Dr. Eigenmann on one of the lakes of the north part of the state

The legislature of Indiana has elected Mrs. Emma Davidson of Peru as state librarian. She is to succeed Miss Mary E. Ahern, who is removed because of her politics. Miss Ahern has filled the position most creditably for the past four years. Mrs. Davidson is a teacher in the Peru schools. Miss Ahern was also a teacher in the Peru schools at the time she was elected.

Arnold Tompkins has ready for the press a new book on the "Philosophy of School Management." Mr. Tompkins has given much attention to this subject, and his book will certainly be a vigorous one.

MARYLAND.

The Maryland delegation at the superintendents' convention, at Cleveland, O., were: Hon. E. B Prettyman, state superintendent of public schools; F. Eugene Wathen, county superintendent of Anne Arundel county; Charles Himelheber, assistant superintendent of Anne Arundel county; Colonel John C. Bannon, clerk of circuit court, Annapolis; Dr. W. C. Claude, Annapolis, surgeon-major of Maryland N. G.; Colonel James A. Diffenbaugh, Westminster, member of state board of education; W. J C Dulaney, Baltimore, the Maryland historian; H. G Weimer, Cumberland, county superintendent of Allegany county; Dr. John E. McCahan, assistant superintendent of schools of Baltimore; General Henry A Wise, superintendent of schools of Baltimore.

MINNESOTA.

Minnesota, 700 miles distant, was represented at Cleveland by State Superintendent W. W. Pendergast, Dr. D L. Kelble, State High School Inspector George B Aiton, President Irwin Shepard, Winona normal; Primary Supervisor Miss Sarah Arnold, Minneapolis; and Superintendents C B. Gilbert, St Paul; R E Denfeld, Duluth; B T. Davis, Winona; M. A. Stone, Stillwater; S. S. Parr, St. Cloud; and —— —— Ross, Paynesville. The fact that so many were in attendance speaks well for the interest of the individuals, while the fact that local boards in most cases, if not in all, were ready to encourage their representatives by making sufficient appropriations to meet the necessary expense incurred, shows commendable zeal in the cause of education on the part of all in charge of the public schools of Minnesota. As Wisconsin showed the same generous spirit, it would seem that the choice of Superintendent R. E. Denfeld of Duluth as secretary of the department of superintendence was a fitting recognition of the educational enterprise of the Northwest in general, and of Minnesota in particular.

MARTHA'S VINEYARD SUMMER INSTITUTE.

The eighteenth annual session of the Martha's Vineyard Summer Institute at Cottage City will begin on Monday, July 8, continuing five weeks, in three departments—elocution and oratory, school of methods, and academic department. This is unquestionably the oldest and probably the largest summer school for teachers in the United States. The new programme is far in advance of anything heretofore offered. It is in the best sense a school. The work is very carefully planned and systematically conducted. It always does more and better work than it promises. It is a great rendezvous for school superintendents, normal and training school teachers, specialists, prominent teachers of all grades, and of kindergartners.

Last year there were over 700 in attendance, from thirty five states, territories and provinces, and from twenty-four normal and training schools.

Martha's Vineyard is one of the most delightful and inexpensive seaside resorts in America. It is as delightful as a retreat as it is profitable as a school.

The faculty is so numerous that it is impracticable to make any attempt to name the attractions. A few of the most noted instructors are: W. H. Payne, LL D., Nashville; Josiah Royce, Ph.D., Harvard; G. H. Palmer, LL D, Harvard; ex-President Alice Freeman Palmer of Wellesley; and Miss Mathilde E. Coffin of Detroit.

THE MAGAZINES

— There are a number of special features in the *Century* for March. The frontispiece is a rare portrait of the Empress Josephine, and there are other illustrations of Professor Sloane's life of Napoleon, in which the record of the Corsican period is closed and Napoleon's stirring life in Paris taken up—his reception in Paris society, his appointment as general of the convention, the day of the Paris sections, and his marriage with Josephine. There is the first of three papers by Miss Harriet Waters Preston of a new field of travel, entitled "Beyond the Adriatic," an account of the beautiful region on the east side of the Adriatic from Trieste to Albania, which is likely to become a favorite resort for travelers in Europe; also a fully illustrated paper on the late Jean Carriès, sculptor and potter; fine portraits of Ysaye, the violinist, and of Helmholtz, with appreciative and critical articles; Mr. Noah Brooks' reminiscences of the conventions of 1864 which nominated Lincoln and McClellan; Mrs. Harrison's descriptions of Morocco and Southern Spain in her novelette "An Errant Wooing." There is also a paper on "The Horse Market," by Henry Childs Merwin; a vigorous protest by Mr. H. C. Bunner against the form of "Cheating at Letters" which he finds in the thinly disguised tracts issued in the shape of fiction; also the usual miscellany in the departments, including this month a story in not-too difficult Chinese dialect, entitled "Chan Tow, the Highrob," by Chester Bailey Fernald; three fine sonnets, by Edmund Clarence Stedman, William Prescott Spofford, and Henry Jerome Stockard; and short stories by George A. Hibbard and Harry Stillwell Edwards, New York: The Century Company.

— That person must indeed be hard to please who fails to find something to his taste in the variety of valuable matter which the *New England Magazine* presents to its readers in the March issue Thomas S. Townsend, in "Massachusetts in the Civil War," gives an able account of the noble deeds performed by Massachusetts' brave sons who came at their country's call. Raymond L. Bridgman, in an excellent article on "Weather Studies at Blue Hill," tells of the careful record kept by the self registering instruments so busily at work at the Milton Observatory. Photographs and diagrams showing the manner of recording the weather changes add to the interest of the article. In the series on "Old Boston Streets," Hamilton A. Hill writes in his interesting way of "Old Milk Street." "Old Dutch Houses on the Hudson," by William E Ver Planck, is a very readable paper describing old homesteads still standing in Dutchess county, N. Y. Admirers of Harriet Beecher Stowe will appreciate the account of her early life in Cincinnati as told by George S. McDowell in his article entitled "Harriet Beecher Stowe at Cincinnati," which is also well illustrated. A most valuable history of the founding and short life of the Northampton Association of Education and Industry, a community not unlike Brook Farm in its organization, is contributed by Olive Rumsey. The Editor's Table is devoted to Public Architecture and the proposed Architectural Commission in Washington. An able paper on "The Part of Massachusetts Men in the Ordinance of 1787," one of the Old South prize essays by Elizabeth H. Tetlow; a short but interesting paper on "The Civil War Envelope," by J Howe Adams, with fac-simile reproductions; an illustrated sketch on "The First Harvard Graduate Killed in the Revolution," by Charles Knowles Bolton. Three admirable stories, several bits of verse with two or three longer poems complete a most attractive number. Warren F Kellogg, publisher, 5 Park square, Boston.

— The educational paper in the March issue of the *Atlantic* is by Professor N. S. Shaler, who treats of the "Direction of Education." Everyone who is interested in anti-slavery literature, or who has read "Neighbor Jackwood" and "Cudjo's Cave," will be glad to read "Some Confessions of a Novel-Writer," by John T. Trowbridge, the gifted author of these remarkable stories. Two papers of importance are "Immigration and Naturalization," by H Sidney Everett, and the second of Mr J. M. Ludlow's papers, "Some Words on the Ethics of Coöperative Production." Another delightful bit of Sicilian travel and description, by Elizabeth Pullen, is "Ibeva Unvisited." The number contains the opening chapters of a striking serial, entitled "The Seats of the Mighty," by Gilbert Parker. Fiction is further represented by the first installment of a two-part story by Grace Howard Peirce, and additional chapters from Mrs. Ward's serial "A Singular Life." Aside from these features, there are poems by Bliss Carman, Clinton Scollard, and Madison Cawein. The book reviews will appeal especially to the lover of poetry, as there is an exhaustive review of current verse. The usual departments complete the issue. Boston: Houghton, Mifflin, & Co.

— The following shows the rich variety of subjects treated in the *Chautauquan* for March: "Queen Victoria and Her Children," by S. Parkes Cadman; "Christianity and English Wealth," by David H. Wheeler, LL.D; "Underground Railway in London," by A. E. Daniell, B A; "Gustavus Adolphus," by Max Lenz; "Sunday Readings," selected by Bishop Vincent; "The World's Debt to Medicine," by John S. Billings, M.D.; Scott's "Woodstock," by Professor R G. Moulton, Ph D.; "Glimpse of a German Watering Place," by Sidney Whitman; "The Blue Bonnet," a story (chapter II), by Charles Barnard; "Chauncey Mitchell Depew," by Franklin Morris; "The New Reign in Russia," by Victor Yarros; "The Bicyle—Its Pleasures and Perils," by Robert Law Seymour; "The Laws of Tempests," by Alfred Angot; "Queen's Gardens," by Ruth Morse; "Princess Bismarck"; "Women Among the Early Germans," by Louise Prosser Bates. The department of Current History and Opinion deals with sixteen of the most important events of the month. The editorial, C. L. S. C., and book departments complete the very able number. Meadville, Pa: Dr. T. L. Flood. $2 00 per year.

— The March number of *Godey's Magazine* is an attractive issue of this famous old publication. This number contains as leading articles: "Ben Bolt," illustrated by Newman; "Types of English Beauty"; "Masterpieces of Greek Sculpture"; "Jeanne d'Arc"; "How a Spectacular is Produced"; "Artists and Their Studios," giving sketches of William M Chase, J. Wells Champney, and C. Ayer Whipple. Besides these, there are short stories, sketches, poems, book reviews, and fashions, the whole set off with nearly one hundred illustrations. 30 Lafayette Place, New York: The Godey Company.

MAGAZINES RECEIVED.

Cassell's Family Magazine for March; terms $1.50 a year. New York: Cassell Publishing Company.

The Century Magazine for March; terms, $4 00 a year. New York: The Century Company.

Pall Mall Gazette for March; terms, $3 00 a year. New York: 8 Duane street.

Harper's Monthly for April; terms, $4.00 a year. New York: Harper & Brothers.

The *Chautauquan* for March; terms, $2.00 a year. Meadville Pa: Dr. T. L. Flood.

Atlantic Monthly for March; terms, $5.00 a year. Boston: Houghton, Mifflin, & Co.

The *New England Magazine* for March: terms, $3 00 a year. Boston: 5 Park square.

CURES OTHERS

Mrs. MARTHA JANE PRINGLE, of *Chase, Jackson Co., W. Va.*, writes: "Having been a great sufferer for many years with nearly every disease my sex is heir to, I can now say I am well and hearty. Have done more hard work in the past year, and with more ease, than I have done for twelve years.

MRS. PRINGLE.

Before consulting you I was the most wretched among women, unable to walk or sit up in bed, and now I owe my good health all to Dr. Pierce's Favorite Perscription, 'Golden Medical Discovery' and 'Pellets.' I gained twelve pounds while using the first bottle of 'Prescription.'

I send you my picture together with my most heartfelt thanks. To any one suffering as I did who wants to know the particulars of my case and who will send a stamped envelope with name and address on, I will write particulars."

WHY NOT YOU?

CATARRH

COLD IN HEAD

DIRECTIONS for using

Cream Balm.

Apply a particle of the Balm well up into the nostrils. After a moment draw strong breath through the nose. Use three times a day, after meals preferred, and before retiring.

ELY'S CREAM BALM opens and cleanses the Nasal Passages, Allays Pain and Inflammation. Heals the Sores, Protects the Membrane from Colds, Restores the Senses of Taste and Smell The Balm is quickly absorbed, and gives relief at once. Price 50 cents at Druggists or by mail. w ELY BROTHERS, 56 Warren St., New York.

Some Recent Publications.

Title.	Author.	Publisher.	Price.
American Literature	Watkins.	American Book Co., N. Y.	$ 35
Manual of Geology	Dana.	" " " "	5 00
Field, Forest, and Garden Botany	Gray.	" " " "	
Roman Life in Latin Prose and Verse	Peck	" " " "	1 50
Meditations in Motley	Hart.	Arena Publishing Co., Boston.	
Ferns and Evergreens of New England.	Knobel	Bradlee Whidden, Boston.	
Bow-Wow and Mew-Mew	Craik.	Maynard, Merrill, & Co., N. Y.	
A Primer of Mayan Hieroglyphics	Brenton.	Ginn & Co., Boston.	
Frye's Common School Geography	Frye.	" " "	
Poems of Sidney Lanier	Callaway.	Chas. Scribner's Son, N. Y.	1 00
Fanciful Tales	Stockton.	" " " "	50
Herbart and Herbartians	DeGarmo.	" " " "	1 00
Voice, Speech, and Gesture	Campbell.	G. P. Putnam's Sons, N. Y.	3 00
Heart Treasures	Damon.	Chas. W. Moulton, Buffalo.	
The Works of Chaucer	Skeat.	Macmillan & Co, N. Y.	
Honest Money	Fonda.	" " "	1 00
Comte, Mill, and Spencer.	Watson.	" " "	1 75
From a New England Hillside	Potts.	" " "	75
The Political Institutions of the Ancient Greeks	Hammond.	" " "	1 25
Always Strong and Happy	Judd.	Outing Company, "	1 50

PUBLISHERS' NOTES.

THE W. A. Choate Company, school and church furnishers, 24 State street, Albany, N. Y., advertise in this issue for teachers, school officials, clergymen, and church officers, who will examine their plan for sale of charter shares, full paid, ten dollars each. They will sell stock at "ground floor" price for a limited time.

THE well-known Advertising Agency and Publishing business of Herbert Booth King & Brother, which has long been one of the landmarks of lower Broadway, New York, have transferred their main office to Madison square, using their down-town office as a branch establishment. They occupy the first floor of their new building, 32 East 23d street, N. Y. With their facilities for setting up and stereotyping advertisements in their own establishment, and almost instantaneously delivering copy to the newspapers, they will be enabled to work carefully and expeditiously for their customers. Herbert Booth King & Brother, besides controling one of the largest advertising businesses of the country, also own a large printing establishment, wherein is printed every sort and kind of circular, catalogue, or periodical, including their own very successful publication, FASHIONS, which has already attained a circulation of a quarter of a million copies.

IMPORTANT —When visiting New York City, save Baggage Express and Carriage Hire and stop at the GRAND UNION HOTEL, opposite Grand Central Depot.

600 Handsomely Furnished Rooms at $1 00 and upwards per day. European plan. Elevators and all Modern Conveniences.

Restaurants supplied with the best. Horse cars, stages, and elevated railroads to all Depots. You can live better for less money at the Grand Union Hotel than at any other first-class hotel in the city.

MISCELLANEOUS.

— *Teacher* — "Thomas, how is it that James can say his alphabet so much better than you can: he never misses a letter?"

Thomas — "He oughtn't to, 'cause his father's a postman." — *Harper's Young People.*

"YIELD NOT TO MISFORTUNE"

"I was afflicted with catarrh last autumn. During the month of October I could neither taste nor smell and could hear but little. Ely's Cream Balm cured it."—Marcus Geo. Shantz, Rahway, N. J.

"I suffered from catarrh of the worst kind ever since a boy, and I never hoped for cure, but Ely's Cream Balm seems to do even that. Many acquaintances have used it with excellent results."—Oscar Ostrum, 45 Warren avenue, Chicago, Ills.

Cream Balm is agreeable.

— *Murdoch* — "Oh, mamma, see the carriage wheels making successful rebellions!"

Mamma — "What do you mean, dear?"

Murdoch — "Why, mamma, teacher said that revolutions are successful rebellions."— *Harper's Young People.*

MRS. WINSLOW'S "SOOTHING SYRUP" has been used over Fifty Years by mothers for their children while Teething, with perfect success. It soothes the child, softens the Gums, allays all Pain, cures Wind Colic, regulates the bowels, and in the best remedy for Diarrhœa, whether arising from teething or other causes, and is for sale by Druggists in every part of the world. Be sure and ask for Mrs. Winslow's Soothing Syrup. Twenty-five cents a bottle. [w

— "How do you like my new play, Criticus?"

"Pretty well; only I would suggest two alterations."

"And what are they?"

"Have the performance begin two hours later and end an hour sooner."—*Truth.*

JOSEPH GILLOTT'S STEEL PENS.

THE MOST PERFECT OF PENS.

Gold Medal, Paris Exposition, 1889,

AND THE AWARD AT THE WORLD'S COLUMBIAN EXPOSITION, CHICAGO.

The Favorite Numbers,

303, 404, 604 E. F., 351, 170, and 601 E. F.

Conduce to the progress of pupils and secure credit to the teacher. w

The Great

POTTER-BRADLEY

Educational and Library

ATLAS OF THE WORLD

IS NOW COMPLETE.

Parts 1 to 20, inclusive, are now ready for delivery.

A Boston grammar master, after examining a few parts of the Atlas, exclaimed, "*You ought to sell a million copies.*"

If you wish your Parts Bound, write us for Terms.

This coupon offer is soon to be withdrawn, as the edition of the Atlas in parts is nearly exhausted and the publishers will not issue another edition in that form. The Atlas can then be obtained only in bound form at a considerable advance in price.

Cut this out and send it to us with 15 Cents.

Coupon for

POTTER-BRADLEY ATLAS of the WORLD.

Send Part No......

Name.....

Full P. O. Address.....

.....

Address all orders, wtf

NEW ENGLAND PUBLISHING CO., 3 Somerset St., Boston. Mass.

TWO NEW YEARLY SUBSCRIPTIONS to the *Journal of Education* will secure a year's subscription free.
NEW ENG. PUB. CO., 3 Somerset St., Boston.

SONGS OF HISTORY.
By HEZEKIAH BUTTERWORTH.
Elegantly bound in cloth. Price, $1.00.
NEW ENGLAND PUB. CO., 3 Somerset St., Boston.

Teachers' Agencies.

A FORM of insurance that involves a new idea should receive the attention of teachers. Insurance of all kinds is in general use. There is life insurance and fire Insurance, and plate glass insurance, and insurance for rents, and insurance against accidents to employees.—even insurance against bad debts. But a good Teachers' Agency gives insurance of another kind—against losing great opportunities. The scholar who said that pins saved a great many people's lives by their not a swallowin' of 'em might have added that chances OF by their not knowing of them. There is a of promotion make a great many teachers miserable tide in the affairs of men which taken at its flood leads on to fortune, but if you don't happen to be on the beach at that time, you don't get there. Now the Teachers' Agency keeps an eye out for you. It knows just what you can do, perhaps a good deal better than you do yourself; and some day, if you keep registered, it writes you that you are its best fit for such and such a position. It seems queer to you at first. You never would INSURANCE have thought of it. But you begin to realize that sure enough it is the right thing for you, and you take it. Not to miss such a chance is a pretty good kind of insurance.

THE SCHOOL BULLETIN AGENCY: C. W. BARDEEN, Syracuse, N. Y.

TEACHERS CO-OPERATIVE ASSOCIATION

Established in 1884. Positions Filled, 3700.

6034 Woodlawn Av., - CHICAGO.

SEEKS TEACHERS who are AMBITIOUS FOR ADVANCEMENT, rather than those without positions.

The Albert Teachers' Agency, 211 Wabash Ave., CHICAGO, ILL.

Established 1887. Teachers located in '94, 376. New circulars give full information.
Vacancies direct from employers.
Teachers personally recommended. w *Address C. J. ALBERT, Manager.*

AMERICAN and FOREIGN TEACHERS' AGENCY Introduces to Colleges Schools, and Families superior Professors, Principals, Assistants, Tutors, and Governesses, for every department of instruction; recommends good schools to parents. Call on or address w

MRS. M. J. YOUNG-FULTON, . . 23 Union Square, New York.

New England Bureau of Education,

3 Somerset St. (Room 5), Boston, Mass.

This Bureau is the oldest in New England, and has gained a national reputation. We receive calls for teachers of every grade, and from every State and Territory and from abroad. During the administration of its present Manager, he has secured to its members, in salaries, an aggregate of $1,500,000, yet calls for teachers have never been so numerous as during the current year.

OUR PATRONS HAVE CONFIDENCE IN US.

"I believe that there are other excellent teachers' bureaus, but I did not feel like putting a matter of so much importance to me wholly in the hands of *any other.*"—E. H. WILSON, *Norwalk, Conn.*

"Your judgment is unerring. Each of the (six) teachers sent us eminently fills the requirement. We made no mistake in placing this selection *carte blanche* in your hands. Both the superintendent and committee commend them."—C. C. CUNDALL, M.D., *Fairhaven, Mass.*

We have had twenty-five such calls this season.

Teachers seeking positions or promotion should register at once. No charge to school officers for services rendered. Forms and circulars free. Address or call upon HIRAM ORCUTT, *Manager.*

THE FISK TEACHERS' AGENCIES.

EVERETT O. FISK & CO., Proprietors.

SEND TO ANY OF THESE AGENCIES FOR 100-PAGE AGENCY MANUAL, FREE. w

4 Ashburton Pl. Boston, Mass.	70 Fifth Ave., New York.	106 Wabash Ave., Chicago, Ill.	32 Church St., Toronto, Canada.	120½ So. Spring St., Los Angeles, Cal.	803 12th St., Washington, D. C.

DIRECT Nearly every day we are now receiving calls direct from employers for teachers in Colleges, Academies, and Private Schools, to begin work next Sept. For many of these positions we have no available candidates who have all the desired qualifications. Following are some of the positions for which we are seeking candidates: (*Men*)—Director of Music in Ladies' College, foreign training preferred; Prof. of Greek and Modern Languages in Baptist College, and Principal of Academic Dept. of same institution; teacher of Classics and teacher of Math. in well known private school in large city; teacher of Penmanship, Shorthand, and Typewriting in Normal College; Prof. Classics, Prof of Math., and Prof. of Modern Languages in Baptist College. (*Women*)—French and History in Episcopal School, Primary teacher for same school (must be Episcopalians); Matron for a Baptist College; Piano, Harmony, Musical History, French, and German in Baptist College (must be Baptist or Methodist); Math. and Sciences in Episcopal School (must be Episcopalian); teacher of Art and teacher of Music for Baptist College. In writing state full particulars in regard to education and experience. One fee registers in both offices. C. A. SCOTT & CO, Proprietors of THE BRIDGE TEACHERS' AGENCIES, 110 Tremont St., Boston, and 211 Wabash Ave., Chicago. | *Applications.*

Penn'a Educational Bureau. 16th Year. Does business in all the States.

L. B. LANDIS, Manager, (E) 205 No. 7th St., Allentown, Pa. } We are already well advanced with this year's registry. We will be called upon to fill from 2,000 to 3,000 vacancies in the various grades, and need a large number of competent teachers. *Register now*, and get the benefit of the full season.

THE COLORADO TEACHERS' AGENCY

Names competent teachers for desirable positions. *Evidence:* "We prefer to send to Prof. Dick for our teachers." Reply made by Secretary Dist. No. —, —— County, Colorado, to an applicant for a position. w

FRED. DICK, Mgr., McPhee Block, DENVER, COLO.

* Albany Teachers' Agency *

Provides schools of all grades with competent teachers. Assists teachers with good records in securing positions. Now is the time to register. Send stamp for circulars. w HARLAN P. FRENCH, Manager, 24 State St., Albany, N. Y.

WINCHELL'S TEACHERS' AGENCY, 120 Tremont St., Boston. 37 West 10th St., New York. 262 Wabash Ave., Chicago,

Wants more graded school teachers and teachers of music for public and private schools. We have more vacancies than we can fill.

THE NEW AMERICAN TEACHERS' AGENCY.

Teachers seeking positions, and those wishing a change at an increased salary, should } Address C. B. RUGGLES & CO. (Palace Hotel Bldg.) Room C, w 237 Vine Street, CINCINNATI, OHIO.

THE WESTERN BUREAU OF EDUCATION

SECURES POSITIONS FOR TEACHERS. Supplies Books at publishers' prices. | This Agency operates in the South. For further information address 7-wtf *HARRY E. JOHNSON, Manager, 3528 Dearborn St., CHICAGO, ILL.*

Illinois Teachers' Agency.

Ambitious Teachers desiring to rise and wishing to come to Illinois. } Register at once. Not a vacancy in the State but is known to us within forty eight hours of determination. BLANK FREE.

Send 2 cents for particulars. Registration fee, 50 cents. [w 1y] ORVILLE BEHREND, Manager, 1509 ASHLAND BLOCK, CHICAGO.

SCHERMERHORN'S Teachers' Agency Oldest and best known in U. S. Established 1855. 3 East 14th St., New York. w

Lady Teachers wanted for advanced Grammar and High School positions in Pennsylvania and other states. Address *at once* National Educational Bureau, ROBERT L. MYERS, Manager, (10th year.) w *HARRISBURG, PA.*

Teachers' Agency OF RELIABLE

American and Foreign Teachers, Professors, and Musicians, of both sexes, for Universities, Colleges, Schools, Families, and Churches. Circulars of choice schools carefully recommended to parents. Selling and renting of school property.

Best references furnished.

E. MIRIAM COYRIERE, 150 FIFTH AVENUE (corner of Twentieth St.) w *NEW YORK CITY.*

Teachers Wanted. { American Teachers' Bureau. St. Louis, Mo. 19TH YEAR

WHEN CORRESPONDING WITH ADVERTISERS, please mention this Journal.

BOTANY

Books of Special Value.

Outlines of Lessons in Botany. For the use of teachers, or mothers studying with their children. By JANE H. NEWELL.

Part I.: From Seed to Leaf. Square 12mo. Cloth. 150 pages. Illustrated. For introduction, 50 cents.

Part II.: Flower and Fruit. 393 pages. Illustrated. Cloth. For introduction, 80 cents.

A Reader in Botany. Selected and adapted from well-known authors. By JANE H. NEWELL.

Part I.: From Seed to Leaf. 12mo. Cloth. 199 pages. For introduction, 60 cents.

Part II.: Flower and Fruit. 12mo. Cloth. 179 pages. For introduction, 60 cents.

Little Flower-People. By GERTRUDE E. HALE. Square 12mo. Illustrated. Cloth. 85 pages. For introduction, 40 cents.

Glimpses at the Plant World. By FANNY D. BERGEN. Fully illustrated. 12mo. Cloth. 156 pages. For introduction, 50 cents.

Elements of Structural and Systematic Botany. For High Schools and Elementary College Courses. By DOUGLAS HOUGHTON CAMPBELL, Professor of Botany in the Indiana University. 12mo. Cloth. 253 pages. For introduction, $1.12.

Plant Organization. By R. HALSTED WARD, Professor of Botany in the Rensselaer Polytechnic Institute, Troy, N. Y. Quarto. 176 pages. Illustrated. Flexible boards. For introduction, 75 cents.

Descriptive circulars sent free on application.

GINN & COMPANY, Publishers,

Boston, New York, Chicago.

A NEW INSPIRATION FOR EVERY TEACHER.

WAYMARKS FOR TEACHERS,

Showing Aims, Principles, and Plans of Every-day Teaching, with illustrative lessons. By SARAH L. ARNOLD, Supervisor of Primary Schools, Minneapolis, Minn. 16mo. Cloth, 276 pp., $1.25.

A stimulating, suggestive, and sympathetic book which deals with the educational topics of today in a forceful and helpful manner.

"A book to be universally admired and everywhere enjoyed."—THE AMERICAN TEACHER.

Send for Catalogues and descriptive circulars.

SILVER, BURDETT & COMPANY, Publishers.

BOSTON. NEW YORK. CHICAGO. PHILADELPHIA.

AIDS FOR TEACHING ART AND HISTORY.

The Prang Educational Company are now publishing a series of reproductions of fine photographs of famous buildings and monuments as aids for teaching Art and History. These reproductions are about 20 x 28 inches in size, of the same color as the original photographs, and do not fade on exposure to light.

Price, One Dollar each.

An illustrated circular showing the subjects thus far published, will be mailed on application to

THE PRANG EDUCATIONAL COMPANY,

646 Washington St., Boston. 47 East Tenth St., New York. 151 Wabash Ave., Chicago.

The TWENTIETH SESSION of the

Sauveur College of Languages AND THE Amherst Summer School

Will be held at AMHERST COLLEGE, AMHERST, MASS., July 1 to August 9, 1893.

BRANCHES TAUGHT: French, German, Italian, Spanish, English Literature, Latin, Ancient and Modern Greek, Chemistry, Geology, Biology, Mathematics, Drawing, Painting, Physical Training, and Library Economy.

For programme address Dr. L. SAUVEUR, 6 Copley St., Jamaica Plain, Mass., or Prof. W. L. MONTAGUE Amherst, Mass.

N. B.—Dr. Sauveur will send to applicants circulars of his educational works. 6-m 2t

Emerson College of Oratory.

LARGEST SCHOOL OF ELOCUTION AND ORATORY IN AMERICA.

Five Hundred Students.

Has a thorough and systematic course of study, including a complete system of Physical Training and Voice Culture, Natural Rendering, and the principles of the Philosophy of Expression. Scientific and practical work in every department. Chartered by the State.

☞ *Winter Term opens Jan. 1st.* Address for Illustrated Catalogue HENRY L. SOUTHWICK, Sec'y, Corner Tremont and Berkeley Streets, Boston, Mass.

eow

CHANDLER'S Normal Shorthand School,

For the Training of Teachers and Amanuenses.

Shorthand Teachers for public and private schools in demand. Course six months. New classes at the beginning of each month. System unequaled. Endorsed by leading educators. In use in many schools. Salaries good. Correspondence solicited. Circular on application. Address MARY ALDERSON CHANDLER, 212 Columbus Avenue, Boston, Mass. (Opposite "Youth's Companion.") w

PLAYS Dialogues, Speakers, for School, Club and Parlor. Catalogue free. T. S. DENISON, Pub. Chicago, Ill.

NEW ENG. BUREAU OF EDUCATION, 3 Somerset Street, Boston. HIRAM ORCUTT, Manager.

☞ When corresponding with advertisers please mention this journal.

Publishers.

FOREIGN BOOKS.

Teachers have the advantage of finding in our store all French and German Grammars and Readers, by whomsoever published.

Rich stock of Imported and American Books in the Foreign and Ancient Languages at lowest prices. Catalogues on application.

CARL SCHOENHOF,
T.H. Castor & Co., successors.

Importers, Publishers, and Foreign Booksellers; the only authorized agency for Henry Holt & Co. American agency for Hachette & Co.'s (London branch) publications.

Removed from 144 Tremont St. to
w **23 School St., Boston.**

Tremont St. Foreign Book Store,

149A Tremont St., Boston.

The publications of HENRY HOLT & CO., WM. R. JENKINS, E. STEIGER & CO., M. D. BERLITZ & CO., HACHETTE & CIE. (London), GINN & CO., HEATH & CO., etc. Large assortment of Foreign and American Books, in the ancient and modern languages. Subscriptions to periodicals. Regular importations from the European book centres.

w G. A. KOEHLER & CO.

A Talk to Teachers.

Why do you keep in your possession so many Text-Books for which you have no present use, and, probably, no future use?

You know,—or if you don't, we beg now to inform you,—that we will gladly take them from you on equitable terms in exchange for anything you may need in the line of

SCHOOL SUPPLIES OR TEXT-BOOKS.

Kindly Note a Few of our Specialties.

Brown's Common School Examiner, $1.00
Kirkland's Composition Subjects, . . .15
Holmes' Drawing Books, 3 Numbers, . .50
(perfectly graded.)

C. M. BARNES COMPANY,
School Books and School Supplies,
253 and 255 State St.,
6-m 5t **CHICAGO.**

UNIVERSITY PUBLISHING CO.,

Educational Publishers,
43-47 East Tenth St., NEW YORK.
Please send for catalogue and price list.
Correspondence solicited.

MAYNARD, MERRILL, & CO.,
43, 45, and 47 East Tenth St., New York.
PUBLISH
REED & KELLOGG'S Complete Course in Language.
MERRILL'S System of Penmanship.
COLLARD'S Beginners' Readers [3 books].
MAYNARD'S English Classic Series.
SHAW'S Physics by Experiment.
ANDERSON'S Histories.
THOMSON'S Mathematics, etc., etc. w
H. I. SMITH, 5 Somerset St., Boston. J. D. WILLIAMS, 151 Wabash Av., Chicago.

Just Published.

HANDBOOK OF COMMON THINGS AND USEFUL INFORMATION.

With numerous illustrations. 18mo. Cloth. 50 cts.

HANDBOOK OF POPULAR SCIENCE.

By JOHN GALL, author of "Popular Readings in Science." With numerous illustrations. 18mo, Cloth, 50 cents.

For sale by all Booksellers. Sent postpaid on receipt of price.

THOMAS NELSON & SONS,

Publishers and Importers, . . . 33 East 17th Street, UNION SQUARE, NEW YORK.

Roman Empire—
Australia—
Holy Land— } New issues of

Klemm's Relief Maps.

Set of 15 now ready.

Price, postpaid: Plain, $1.00; Waterproof, $1.75.

WM. BEVERLEY HARISON, 59 Fifth Ave., N. Y. City.

Boston: Boston School Supply Co.; J. L. Hammett.

ISAAC PITMAN'S SHORTHAND
TAUGHT IN THE
PUBLIC DAY SCHOOLS OF
NEW YORK CITY.

Send for specimen pages of "Isaac Pitman's Complete Phonographic Instructor." Used exclusively in above schools. Address

ISAAC PITMAN & SONS 33 Union Square, N. Y.

Attend the Metropolitan School of Shorthand 95 Fifth Ave., cor. 17th St. *Special course and rates to teachers.*

Wanted. General Agents to control agents at home, for "Dictionary of U. S. History," by Prof. Jameson. Needed by every teacher, pupil, and family; indorsed by press and public. Big pay.
w PURITAN PUB. CO., Boston, Mass.

"Student's Classics."

A new volume of piano music in the famous "Classic Series," which should be examined by every player, teacher, and pupil.

The **37 Compositions** in the book are from the best modern sources, and form a collection of rare excellence, variety, and interest. The pieces are of only moderate difficulty, being intended for the advanced pupil or the player of but medium skill. ***143 pages.***

THE FAMOUS "CLASSIC SERIES"

represents the best work of the best modern composers. It now comprises the following volumes:

"Song Classics," 2 volumes.
"Piano Classics," 2 volumes.
"Classical Pianist."
"Song Classics for Low Voices."
"Classic Tenor Songs."
"Classic Baritone and Bass Songs."
"Classic Four Hand Collection."
"Classical Coll." Violin and Piano. 2 vols.
"Classical Coll." Flute and Piano.
"Young People's Classics," Vols. 1 and 2.
"Classic Vocal Gems," Soprano.
"Classic Vocal Gems," Alto.
"Classic Vocal Gems," Tenor.
"Classic Vocal Gems," Barit. or Bass.
"Selected Classics for Piano."
"Student's Classics."

Each Volume, Paper, $1.00; Boards, $1.25; Cloth Gilt, $2.00, postpaid.

Send for Descriptive Circulars.

Oliver Ditson Company,

453-463 Washington St., Boston.

C. H. DITSON & CO., N. Y. eow

Horton's Adjustable Number Card

Saves time; and, by means of the *thousands of Drill Examples*, makes the pupils quick and accurate

Send for descriptive circular.

w JOSEPH I. HORTON, *Ipswich, Mass.*

PLAYS and **Recitations** up to date for Schools Societies, Churches, etc. Samples FREE P. GARRETT & CO., Philadelphia. (Est. 1865)

The Greatest Railroad on Earth.

Santa Fe Route

Most Picturesque Line to Colorado.

If you go to N. E. A. meeting at Denver in July, please remember that the Santa Fé offers:

1. As low rates as anybody else.
2. Through Pullman sleepers and free chair-cars from Chicago.
3. One hundred miles' view of the Rocky mountains between Pueblo and Denver.
4. Opportunity to attend Summer School at Colorado Springs, under shadow of Pike's Peak,—on return trip.

For pamphlets, address G. T. NICHOLSON, Gen'l Pass. Agt., Monadnock Building, Chicago.

No other line is so popular.

THE NEW GEOGRAPHIES ARE READY,

And correspondence concerning them is solicited.

If you contemplate a change of Geographies in your schools, you can not do justice to the schools or to yourself without examining the Rand-McNally series.

We wish to afford all teachers and school officers an opportunity to examine these very latest Geographies.

4 RAND, McNALLY & CO., CHICAGO.